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BY

JOHN REDMAN COXE, M. D.

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MEDICAL MUSEUM.

VOL. II.....No. I.

An Account of the good Effects of copious Blood-letting in the Cure of an Hemorrhage from the Lungs; in a Letter from the REV. DR. SAMUEL S. SMITH, President of the College of New Jersey, to DR. BENJAMIN RUSH.

Princeton, March 19th, 1798.

DEAR SIR,

AS the science of medicine is established on an induction of facts, well attested histories of the successful treatment of diseases must be singularly useful. It is with a view to add one case more to your useful collection, that I have been induced to give you an account of an uncommon hemorrhage with which I have been affected myself, and of my perfect recovery from it.

A certain weakness of breast, and tendency to hemorrhage, was hereditary on my mother's side of the family, whom I was supposed to resemble in constitution and countenance. Shortly after I was licensed to preach, I was thrown into a situation which required unusual exertions. I had often to address very large assemblies, at least three times in the week, and frequently every day. In consequence of these ef-

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forts, at the end of about three years I began to raise small quantities of blood at the close of each discourse. This symptom continued to increase; and during nearly four years more, though I moderated my exertions, and made them much less frequent, I raised some blood at the end of almost every sermon that I delivered, and sometimes in considerable quantities. The spitting often continued in a less or greater degree for several days afterwards. I was at length obliged to intermit preaching entirely for the space of eight months, during which time I spent part of a season at the Sweet Springs in Virginia. I recovered a tolerable, though a delicate state of health. At this period I was removed to Princeton, where speaking to small assemblies, and in a chapel happily accommodated to favour the voice, I continued to preach, and to attend my other duties in the college, during two years, with increasing health and vigour. In the autumn of the year 1782, I suddenly broke a blood-vessel in my breast, as I was walking. A considerable quantity of blood issued from the wound; but by bleeding copiously at my arm the flux from my breast at that time was stopped. Nearly about the same time in the next evening I felt my pulse quicken, and an unusual tension growing on all my nerves, and, in a few seconds, the blood began to spout with great velocity through my mouth and nose; I was again bled largely twice in the course of the evening, from my arm and foot. The following evening a similar paroxysm returned, and the blood again spouted with great force from my mouth. The physician was sitting on my bed-side at the time; and when I perceived the quickening of my pulse, and that strange stricture coming, as it seemed to my feeling, on the whole system of the nerves, I gave him notice of it, and requested him to bleed me. He refused, and said so much bleeding would only tend to bring on an habitual hemorrhage by debility. I told him I would rather die bleeding from the arm than from the mouth. At last, when he saw the force with which the blood issued, and, in consequence of my earnest solicitations, he bled me again. I requested him to leave me his

lancet, and I would be answerable for my own life. This he reluctantly consented to do. At this time two other physicians were called in, who bled me twice more the same evening before they could effectually stop the flux from my mouth. Next day I expectorated nearly a pint of clotted blood that had been lodged somewhere in the cavities of the lungs. Being now in possession of a lancet, and apprised by experience of the symptoms that preceded the return of my disorder, I determined to anticipate it, and, when the physicians were not present, to open my own veins. This I did accordingly, whenever I perceived the symptoms I have already mentioned, which now recurred more frequently for four or five days. After that period they subsided. But I continued bleeding at the arm two, three, and four times in the day, till the tenth day. My intention was to take off the impulse of the blood from the wounded part, to prevent an inflammation, and to give it time to heal. I may, perhaps, have bled myself oftener than was necessary. After pursuing this course, however, the flux of blood no more discovered itself from my breast. Two-and-thirty times I was bled in the space of ten days, in my arms and feet, besides what flowed from my mouth. And it was computed, from the dimensions of the vessels in which it was received, and other circumstances, that I lost, in that time, at least two gallons of blood. Even in this reduced state, so great was my apprehension of the hemorrhage in my breast returning, I continued to bleed at the arm twice in the week for some time, afterwards once in the week, and finally, once in a month during several months; though not in large quantities at each time. After the hemorrhage was entirely stopped, my flesh wasted away for want of its proper nourishment in the blood, till not a muscle could be perceived on any of my limbs—The skin appeared to be drawn almost close to the skeleton—I spoke only in a whisper—And I was not sensible of having forgotten myself for a moment in sleep during six weeks. My complexion was tinged with a yellowish hue, and an acid so prevailed in my constitution, that with my tongue I have frequently curdled

a small bowl of milk. For more than three months I could not use bread, or any vegetable substance in my diet. I lived chiefly on beef liquor, soups, and white meats. I drank a little weak wine and water frequently; but after many trials, I found porter as a drink agree best with my stomach, and at the end of some months I used it freely and constantly. As soon as I could bear the motion of a carriage, I took gentle exercise in that way. Afterwards, when I could sit a horse alone, I was helped into the saddle, and every day rode a small distance, increasing it gradually till I rode from twelve to fifteen miles in a day. Here my recovery was at a stand for some months, when I resolved to try the effect of a long journey on horseback. I rode first into Connecticut, and afterwards to Boston, in which journeys I laid the foundation of that good health which I have now continued to enjoy for more than ten years; and my voice, particularly, is clearer and stronger than it ever was. A habit that frequently required aperient medicines, was greatly increased by loss of blood, and for more than seven years I was obliged to have daily recourse to them. It is now upwards of three years since I have used them at all. A pint of beer or of cyder at any time sufficiently answers the purpose. This fact is contrary to another principle of many physicians, and contrary to the pressing advice of several of my medical friends, rather to struggle with the disease than to use so constantly the medicines necessary to overcome it. They assured me that I would totally destroy the tone of my bowels, and perhaps fall an early victim to my remedies. However, resolved to live as comfortably as possible while I should live, and not solicitous for a prolonged existence of sickness and pain, I persisted in my own course; and I now find that the medicine was infinitely less pernicious than the habit, and that, contrary to prediction, it has relaxed the tone of my bowels just to that state in which it ought to be. I have found, however, many years ago, that a small pressure upon them impeded their regular action, and produced sickness at stomach, and pain in

the head. This induced me to invent a kind of suspenders to relieve my stomach, long before I knew that fashion would employ them to shew the shape to more advantage. My own experience has convinced me that persons of delicate habits often suffer greatly from tight waist-bands, when they are not able to assign the cause, and especially women, from the manner in which many of them tie their clothes, and the weights they suspend in their pockets.

Thus, sir, I have given you the history of my disease and the treatment of it, which, I doubt not, you will pronounce uncommon. I have gone back to an early period of it, that, having all the facts before you, you might form a more accurate judgment of the whole. I have, perhaps, carried my bleedings somewhat farther than was absolutely necessary; but, in such cases, it is difficult to fix the point of strict necessity, and success has justified my rashness. And I am persuaded that, to great bleeding, and the thick flannels in which I immediately wrapped myself, all with a view of taking off the impulse of the blood from the wound in my breast, I owe my freedom almost wholly from inflammation and cough. I judge thus, because in many instances since that time, when I have imprudently taken cold, and feared the effect of the cough on my breast, I have had immediate recourse to increase of flannel and to bleeding, which have relieved me in a very short time.

I have had no medical education, and have had no theory to bias my mind. What I have done at any time contrary to advice, I have done, impelled by the urgency of symptoms, or led by probable conjectures concerning the effect of the means I used, without being restrained by principles which might, perhaps, have intimidated me. I draw no general conclusions from my particular case. This you will be better able to do when you have compared it with so many others which must have come under your observation. I believe it would be dangerous for an indolent and inactive person to be reduced so low by bleeding as I have been, or one who had not equal resolu-

tion to make the exertions necessary to recover him from that state. Activity in duty, and firmness of mind are often among the best medicines.

I am, Dear Sir,

With the greatest respect,

Your most obedient humble servant,

SAMUEL S. SMITH.

History of several Cases of Phthisis Pulmonalis treated with Mercury.

Lewistown, Mifflin county, (Penn.) May 28, 1805.

SIR,

THE three following cases of Phthisis Pulmonalis treated with mercury, I transmit you for publication in the Philadelphia Medical Museum, if you should deem them worthy of insertion.

In one case the mercury was ineffectual; but this case can furnish no objection to its use; on the contrary, it irresistibly enforces more seasonable application. Although the treatment of pulmonary consumption, by mercury, is pretty generally known, yet there still prevails such a degree of scepticism of its efficacy, amongst many of the physicians, distant from the city, as to render the publication of cases, as they occur, highly necessary. Some have used it without success, which has deterred them from a second attempt. But it is not to be supposed that it can effect a cure in every instance. Other diseases, of much less force, have destroyed life, notwithstanding they have had their appropriate remedies.---It is to be hoped that the doubts of medical men on this subject, will shortly be dissipated; and to furnish my mite, the subsequent cases are submitted.

I am, Sir, with respect,

Your most obedient,

WILLIAM WATSON.

DR. JOHN REDMAN COXE.

I WAS called, on the 8th of February, 1804, to visit E. W. Hale, Esq. counsellor at law, a young gentleman about twenty-seven years of age, who, a few days before had been attacked with pneumonia, from great exposure to cold. He was able to walk about, but, contrary to his usual appearance, was very much dejected, complained of lassitude, fever, and hard and dry cough; but unaccompanied with pain in any part of the thorax; the pulse small, but tense. I conceived his disease to be a bad catarrh, but having suspected, for some months previous, that his lungs were in a very weak state, I felt a good deal apprehensive of the event.

He was bled, and took an emetic of ipecacuanha. His blood exhibited very evident marks of inflammation, and his pulse rose after the operation. I left him a few pills composed of digitalis and opium, from which, in former cases of this disease, I had experienced very happy effects; and, as I lived twelve miles distant, I directed him to be bled next morning, if the cough and stricture were not relieved. He was bled the next morning, and I visited him on the 10th. He had found no relief from the remedies mentioned, and the indication for blood-letting was greater than at any time before. I bled him; the blood was fizy and coated as in pleurisy. I left him some antimonial powders, compounded of nitre, tartarized antimony and calomel, in the proportion directed by Dr. Rush. He was to take one every second hour till my return, and also to be bled every day, if fever and stricture were not abated. On the 12th I visited him; he seemed much better; was able to walk about; but as the cough was still hard and dry, with stricture, he was again bled, and directed to have the operation performed daily, till he could expectorate with freedom. The powders were repeated, so as to purge him and sweat him. On the 17th he sent for me: I found him much worse: he was unable to leave his bed, fever very high, his cheeks efflorescent, and his pulse frequent and tense. I bled him, and remained the night with him, and the

next morning bled him again. The blood was very inflammatory, but there was still no pain of the chest. The antimonial powders were continued: they sweated him and purged him, but neither the cough, fever nor stricture, were relieved. The 20th I saw him; he complained much of weakness and a distressing tickling cough. His pulse still indicated blood-letting; the blood very inflammatory. I gave him a mixture of nitre and spermaceti, in the yolk of an egg, which appeased the tickling. The arterial action was now less convulsive, fever much moderated; but the cough and oppression of the præcordia continued with much distress. From the commencement of the disease, he had expectorated after coughing, a little thin acrid matter mixed with striæ of florid blood. I now applied a blistering plaster over each lobe of the lungs, so large as to cover the whole anterior portion of the thorax. While the blisters were rising he sweated most profusely. The blisters rose well and excited severe strangury, which I did not attempt to relieve as long as it could be borne, having observed, in fevers, the happiest effects from this symptom, in determining excitement from parts more essential to life. The strangury was removed by the spiritus nitri dulcis. The cough was now very distressing, and expectoration by no means free; but there was a total change in the action of the pulse. It was faltering and thread-like, and the coughing harassed him so much, that I was apprehensive he could not survive many hours. Profuse sweating and frequent deliquia animi: laudanum was prescribed, and to be repeated after short intervals, to prevent the torpor of indirect debility. He took a little Madeira wine frequently and sago gruel for food; with these he was supported for several days. From his cough, hoarseness, stricture, and the matter expectorated, being streaked with blood, I was satisfied the disease had degenerated into phthisis pulmonalis. At this time he was as much emaciated, as I had ever known a patient to be in the typhus state of the same disease.

It was then twenty-two days from the period of attack; I had no hopes of a recovery. He was unable to change his po-

sition in bed. A severe hectic visited him every afternoon, and he could not speak to be understood. He took wine, laudanum, opium, and sometimes bark; but they afforded a very temporary relief.

I had seen, some time ago, in the Medical Repository, three letters from Dr. Rush to Dr. Miller, on the efficacy of mercury and tonic remedies in pulmonary consumption. I had attempted this medicine with others, but they were too much exhausted before they would submit to its administration. I now began it with Mr. Hale, but doubted much whether ptyalism could be excited. I dreaded that the excitability was too far exhausted to favour the operation of any remedy.

Half an ounce of strong mercurial ointment was directed to be rubbed into his sides and breast every night, and two grains of calomel, with half a grain of opium to be taken every fourth hour. This prescription was attended to till the 26th, when I saw him: the mercury had produced no affection of the stomach or intestines. He had become costive. In addition to former directions another half ounce of the ointment was to be rubbed into the same parts every morning. The 28th, he had still no defection from the bowels; two laxative enemata were administered in the course of the evening, which removed the constipation. The mercury was continued without any evident effect, either upon his mouth or upon his breath. In addition to the mercury already prescribed, four grains of calomel were directed to be taken morning and evening, mixed with a little honey, which was to be dissolved in the mouth, with the intention of exciting action in the gums and salivary glands. On the 4th, there were no symptoms of mercurial disease; the medicine did not even purge him.

The mercury had now been taken for eleven days, in the quantities mentioned. He ceased to take it internally, but two ounces of mercurial ointment were directed to be rubbed into his sides, breast, and thighs, every twenty-four hours, and Madeira wine and laudanum to be given in such quantities, and repeated after such intervals, as might support the continued

excitement of the medicine. They were prescribed with the intention of raising the system, to that point, which would favour the salutary operation of mercury. 6th, No symptoms of ptyalism. 9th, The same; cough distressing, copious expectoration of pus and florid blood, excited with deep, sonorous, and difficult coughing. Hectic fever very high every afternoon.

The vascular system, as well as the muscles, were in the most extreme state of debility. The mercury was still continued externally, and bark given to support a more durable excitement, and laudanum to appease the distress of coughing. His common drink, during the whole course of this treatment, was malt beer, in the usual strength. 11th, No change of situation. Bark did not agree well with his stomach, and wine, soups, and opium, were administered as a substitute. 14th, I visited him,---the mercury had not acted.

I then consulted, by letter, my ingenious friend Dr. Harris, of Bellefont, who, I had heard, had been successful in the cure of Phthisis Pulmonalis, with the mercurial treatment. He advised the use of more durable stimulants, as columbo, gentian, &c. and the application of flannel bandages saturated with mercurial ointment, to the breast and sides, after removing the skin by blisters; but to precede the tonics with a nauseating dose of tartarized antimony, to excite new action of the stomach. A trial of the carbonic acid gas, as directed by Dr. Beddoes, was also recommended, either as a means of depriving the lungs of the usual quantity of oxygen, the principle of inflammation and ulceration, or as a vulnerary. The nauseating dose was immediately prescribed, the blister applied to the breast and ribs, and columbo given in substance, mixed with beer. This was done on the 17th.—19th, His condition as usual. The saturated bandages were now applied. Calomel was rubbed into the mouth and gums, and mercurial ointment was rubbed into his throat. He inhaled, during several days, the carbonic acid gas from a tube placed in his mouth, when it was discontinued, as well from its apparent inutility, as from a supposition that it might impede the ptyalitic excitement of mer-

cury by disoxygenating the system. He alternated the durable stimulants, columbo, gentian, orange peeling and bark, with one another, till the 26th, when calomel and opium were given in doses of a grain each, every fourth hour. The stimulants were continued, the calomel rubbed into his cheeks and gums twice a day, and the ointment into the throat as often. The bandages were renewed after being saturated, every twenty-four hours.

His mouth had been sore from the commencement of the disease; but it now exhibited evident symptoms of the operation of mercury; his breath also indicated the action of the medicine; but all the symptoms of pulmonic disease continued with unabated violence. 29th, His mouth ulcerated, but no appearance of ptyalism. April 2d, The salivation had not begun, nor did his mouth appear more affected. From the 21st ultimo I had discovered soreness of the gums from the mercury. At this time, I had it in view to try the nitric acid, to hasten the ptyalitic action, but when I returned on the 4th the salivation had begun.

Thus, after having spent *forty-two* days in the most assiduous attempts to salivate him; with unspeakable joy I succeeded, after having prescribed two hundred and twenty-two grains of calomel, and thirty ounces of mercurial ointment, composed of two parts axunge, and one part hydrargyrus. The stimulants mentioned were continued, and the mercury as before, and he had used a cordial and stimulating diet, from the transition of excessive to deficient excitement of the muscular and vascular systems.

8th, He salivated about two pints in the twenty-four hours. The cough had abated in frequency and violence. The saturated bandages were suffered to remain, but the calomel and opium were withheld. 12th, The salivation had increased to three pints, the cough perfectly easy, and the quantity of pus expectorated, much diminished. 16th, The mouth and fauces very much swelled, salivation very profuse. The columbo, &c.

were withheld, and laudanum directed to be frequently taken, and a gargle of borax and honey dissolved in tepid water, diligently used. 19th, The discharge of purulent matter had disappeared, and the cough had entirely left him. At this time, from two to three quarts of saliva daily flowed from his mouth. The emaciation was extreme, and he had not as yet been able to raise himself from his bed. His appetite good. He now took columbo in infusion, cordial diet, and laudanum. The saturated bandages were directed to be removed; but owing to a mistake in the attendants, they were suffered to remain on till the 1st of May. At this time he could walk through the room, although the salivation had not abated in the least, and the emaciation was, if possible, greater. The bandages were now removed. He continued the columbo, gentian, &c. and on the 11th, the ptyalism began to abate, but did not altogether leave him till the 15th of June—all which time he took the durable stimulants in diminished quantities, cordial diet, wine, beer, and London porter.

The recovery of health was rapid; but hoarseness and weakness of the voice remained. He was directed to take garlic daily, which removed these symptoms about two months after. He is now more lusty than he had ever been before; but occasionally feels a pain in his breast from close reading or writing, which leaves him when he rides or exercises. From the 22d of February he drank half a gallon of beer daily. Five weeks of the time he was under the operation of mercury, he never spoke, on account of the tumefaction and soreness of his mouth, tongue, and fauces.

He had the remittent fever slightly, the autumn before he was attacked with pneumonia; till that time he had been very healthy, and somewhat corpulent. The disease was not hereditary, nor had he any appearance of mal-formation of the thorax. Since his recovery, he has been perfectly healthy, except that he had a few fits of vernal intermittent, in the last month.

I was called on the 10th of April, 1804, to visit Mrs. Irvine, a married lady of delicate habit, about thirty years of age, who had been afflicted with cough and pain of the chest, for eighteen months before. She was confined to bed, much emaciated, with incessant cough, and purulent expectoration, no appetite, hectic fever in the afternoon, pulse quick, frequent and irregular, oppression and dyspnoea, especially on the slightest motion. She had borne three children, and from the birth of the last, she had dated her disease.

I took away a few ounces of blood, gave her the antimonial powders, and directed two drachms of mercurial ointment to be rubbed into her sides and breast every night. 13th, Her mouth sore, gums swelled, and ptyalism begun. I was suddenly called to her to-day, when I found her in an hysterical paroxysm. I gave her a few drops of vitriolic æther, which, after two or three repetitions relieved the paroxysm.

About two o'clock the next morning, I was sent for, in the utmost haste, to visit her. When I arrived, I found the attendants supporting her in the bed, in a fainting fit. In her sleep she had been attacked with menorrhagia, and the discharge was so profuse as to induce deliquium, before it was discovered. No pulse could be distinguished, and the discharge continued without abatement. I gave her a little laudanum, and directed one of the attendants to introduce flour into the vagina, and press upon it with the hand; and as soon as she could swallow with freedom, I gave her kino and alum rup. She took them in such quantities, and repeated with as much frequency as her stomach would bear. The discharge, however, did not abate. I was afraid to apply cold water, by reason of the mercury; but I soon saw it must be used or my patient must sink. Cold water was then applied to the abdomen, perinæum, &c. the windows were opened, and she was directed to drink cold water. The disease abated soon after, and ceased in two or three days. I looked forward with much anxiety for the consequence; but on the 15th her throat, fau-

ces, tongue, &c. swelled astonishingly, but her breathing was not much impeded, and I was now relieved from my apprehensions. The tumefaction of the throat was so great as to prevent swallowing. For ten days she was supported by injections of broth; but the swelling then gave way to blistering on the back of the neck and around the throat, and borax as a gargle. 22d, Salivated about a pint daily: the mercurial frictions were continued. May 1st, Salivation profuse, cough and purulent expectoration much abated. 9th, Cough and expectoration ceased. 14th, Mercurial frictions were discontinued, and an infusion of columbo with wine and a cordial diet, were recommended to be taken. She was excessively weak, but after this time recovered strength daily. 26th, Salivation abated, which left her the 7th of June. She continued to take columbo, gentian, bark, and orange peeling, in succession, till the 1st of August, when her strength was quite restored. She is now much more healthy and strong than she has been for several years.

Miss LYON, a young lady of twenty three years of age, put herself under my care in May, 1804. She laboured under phthisis pulmonalis for eighteen months or two years. She was much emaciated, had hectic fever, night sweats, did not cough much, nor did her cough agitate her; but she expectorated very freely, had great weakness, and was very averse from motion or exercise. I gave her calomel and opium, and directed mercurial ointment to be rubbed into her sides and breast. The mercury produced no effect. A large blister was applied to her breast and ribs, and saturated bandages applied as in the case of Mr. Hale, but still without effect. Blisters were then applied to the inner sides of her thighs and under her arms, and dressed with mercurial ointment and calomel united. She took infusion of columbo through the day, in such quantities as her stomach would bear, and opium at night. These remedies were continued for six weeks without any abatement of pulmonary disease, and without exciting the least action in the gums, fauces, throat, or salivary glands, when she died a la-

mentable instance of too late application ;--the excitability being exhausted below that point, in which mercury will excite disease.

On the diuretic Effects of Mercury in a Case of Syphilis. By
JAMES S. STRINGHAM, M. D. *Professor of Chemistry in Co-*
lumbia College, &c.

New-York, June 10, 1805.

SIR,

SHOULD the enclosed case of the diuretic effects of mercury, and its consequent inefficacy for the complete removal of venereal symptoms, be deemed worthy a place in your very useful work, it is altogether at your service.

Permit me to take this opportunity of expressing my earnest wish that your labours for the promotion of medical and philosophical knowledge, may meet with that liberal assistance and encouragement, to which objects so important are entitled. A candid and judicious periodical work containing a correct history of facts, uninfluenced by the peculiar hypotheses of its editors, has for some time past been a desideratum in our country, for supplying which our attention is now principally directed to the efforts of our medical brethren in Philadelphia.

I am, Sir, with respect,
your very humble servant,

JAMES S. STRINGHAM.

DR. JOHN REDMAN COXE.

A—— B——, the subject of the following case, applied to me early in the month of October last in consequence of a small ulcer in the throat, which he suspected to be the effect of a syphilitic taint, as he had had chancres during the summer before. It appeared that for the cure of these he had taken a very considerable quantity of mercury, though his mouth had been but slightly affected by it. I advised him again to adopt a mercurial course; and for this purpose furnished him with the pilulæ hydrargyri of the Ed. Pharm. Of these he began with one, morning and evening, but finding no inconvenience of the stomach or bowels from them, he gradually increased the quantity to eight each day. These, together with the decoct. lignor. were continued from the 30th of October to the 19th of December, when by my particular request he desisted from any further use of the remedy. I was much surprised to find that, notwithstanding the great number of pills which he had taken, and the great quantity of mercury which must necessarily have been introduced into his system, no perceptible effects had been produced either upon the salivary glands, the gums, or the breath. On inquiry, he informed me that he had sometimes experienced a slight soreness of the mouth while taking the pills, that this was soon succeeded by an unusual flow of urine, after which every trace of the mercury entirely disappeared. This presented to me a case of a complexion entirely novel, and I determined to make another effort to produce an effect which I considered as essential to his safety. Accordingly, he again commenced taking mercury combined with opium, and every precaution was taken to guard against its action as a diuretic—but in vain; no sooner was any part of the fauces affected by the medicine, than a præternatural secretion took place in the kidneys; and although he continued to take his pills regularly, his mouth became sound as though they had never been exhibited. With respect to his throat, the ulcer began to mend shortly after he commenced the mercurial course, and in about three weeks entirely disappeared; but it has since occasionally returned, though by the applica-

tion of caustic it was removed in two or three days. I may remark, that during the exhibition of the mercury, neither the stomach nor bowels of my patient were in any way affected by it.

It is very possible that cases of a similar kind may have occurred in the private practice of other physicians, but I do not recollect that any instance has been recorded, where such a regular determination to the kidneys took place from the action of mercury, so effectually counteracting the objects for which it was intended. I confess that I feel no small degree of embarrassment with respect to that plan of treatment which will most effectually guard against the recurrence of syphilitic symptoms in this case, and more particularly as to what are the data, on which I may venture to pronounce my patient secured against any future inconvenience from his present infection.

I have heard physicians complain of the great difficulty they sometimes found in producing salivation. May not the same obstacle have existed in such instances as in the case just related? And where too profuse a salivation supervenes, may we not infer from this case, that diuretics are the most effectual means by which to procure an alleviation of symptoms?

An Account of a remarkable Child born at Woburn, in New-England, April, A. D. 1771. By DR. BENJAMIN THOMPSON, of Concord, in New-Hampshire; with a plate.

IN the beginning of April 1771, the wife of William Johnson of Woburn, (a woman of a strong robust constitution, aged about 38 years) was delivered of her seventh child, after having been pregnant about eight months and a half. Having heard

that there was something extraordinary in the form of the child, I went to see it, and found the following particulars, viz.

1. A remarkable separation of the *frontal bones*, extending from the *coronal suture* quite down to the nose; leaving an opening between the bones about an inch in width in the widest part, covered by the *cutis*, which was exceedingly thin and transparent; the edges of the bones, and the vessels of the *dura mater* appearing quite plain through it.

2. A complete hare-lip.

3. There was not the least appearance of any thing like an arm, *scapula*, *clavicula*, or *ribs* on the left side. The common integuments being continued from the spine of the *vertebrae* to the *sternum*, served as a covering to the left lobe of the lungs, heart, &c. the latter of which pushed the skin outwards in the form of a large tumor.

4. From the *anterior* and *superior* part of the *sternum*, projected a small body about an inch and a half in length; in form and size very much resembling the finger of a child.

5. The distance between the spine of the *os ilium* and the articulation of the *humerus* with the *scapula*, was very small; which at first led me to imagine that some of the *vertebrae* of the back or loins were wanting: but upon a more nice examination I found, that this apparent shortness of the *abdomen* arose from a very remarkable curvature of the *lumbar*, and two or three of the *dorsal vertebrae* forwards, in such a manner that the distance between the *os sacrum*, and the eighth or ninth *vertebra* of the back was scarcely half an inch. The skin and common integuments being continued in a straight line from the back to the *os sacrum*, it rendered the curvature less conspicuous externally. This bend of the *vertebrae* being directly forwards, it rendered the cavity of the *abdomen* exceedingly small, and irregular: but the *abdominal viscera* were by no means small in proportion to the capacity of the *abdomen*, but rather excessively large, even when considered with respect to the bulk of the child.

The *cutis* passing from the *sternum* obliquely downwards to the *posterior* part of the *ossa ilii*, and from thence being connected to the upper edge of each *os ilium* and the *ossa pubis*, it left the *anterior* and *lateral* parts of the abdomen without any appearance of skin, abdominal muscles, or any other integument save only the peritoneum, which (projecting outwards through this aperture) contained the *abdominal viscera* in the form of a vast *sacculus*.

6. The bones, muscles, and integuments, of the pelvis and thighs; the figure and situation of the parts of generation, &c. all seemed to be proper to a male. The left leg was considerably crooked and irregular. Both feet were very much deformed; the sole of the left turning almost directly upwards and outwards, and the four smaller toes of the right growing together by pairs, each toe having a separate nail. The bones, muscles, skin, &c. of the right shoulder, arm and hand, were proper, to external appearance. The *musculi mastoidei* arose from the *sternum* as is common; and all the other parts of the child (so far as I was able to determine) were natural in form and situation, as far as was consistent with their dependence upon, and relation to, those parts which were wanting and deformed. But as I was not permitted to examine the body any further, I am not certain but that there were other remarkable misconformations internally: as to its external appearance the inclosed drawing is a pretty exact representation, being a copy from one which I drew when I went to see the child, and which was thought by all present to be a great likeness.

The want of abdominal muscles, and ribs on the left side, rendered respiration impossible; but though the lungs were never inflated, yet the circulation was carried on for more than an hour after the *umbilical* vessels were divided, as I was informed by the surgeon who delivered the woman; and also that during that time the child was frequently seen to move its head, hand, &c. It is very improbable that the surgeon (who was a very judicious gentleman) and other persons who were present, should be deceived with regard to the circulation after deli-

very; for the left side being destitute of ribs, as before mentioned, the motion of the heart was seen very plainly through the skin, pleura, &c.

Upon asking the mother whether she had met with any accident (such as a fall, fright, or the like) during her pregnancy, which she thought might occasion the deformity of the child; she told me she had met with nothing extraordinary, nor did she at all expect to have been the sorrowful mother of such a monstrous infant.

AN EXPLANATION OF THE DRAWING.

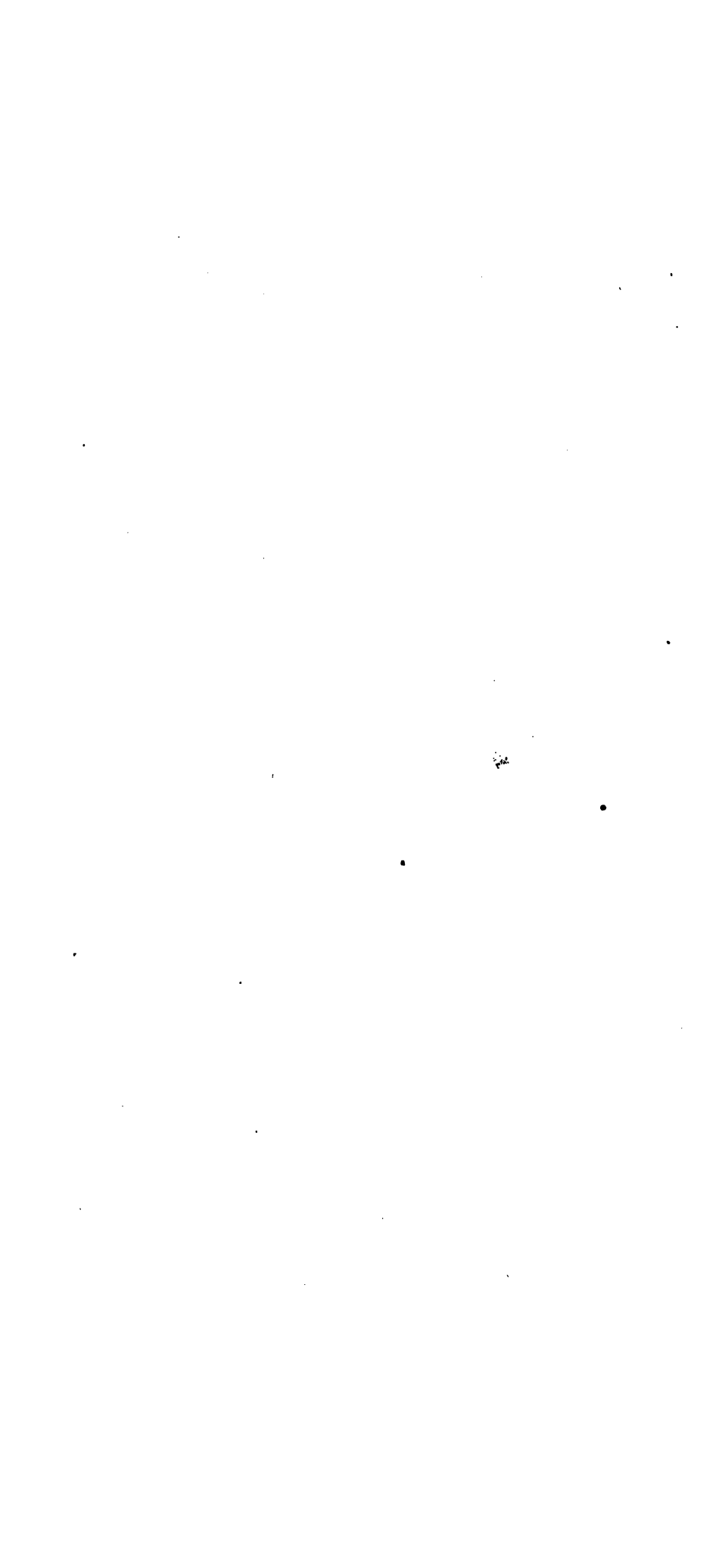
- A. Represents the opening in the cranium.
- B. A hare-lip.
- C. A small body projecting from the sternum.
- D. The bowels lying without the abdomen.
- E. A club-foot.
- F. The toes growing together by pairs.

An account of a Case of Fever and Pain from Rheumatism, being relieved by the discharge of electric Sparks from the Body. By FRANCIS JOHNSON, Esq. near Philadelphia.

FOR many years, I had, from a variety of observations made upon my own *person* and *health*, conceived, that *good health* depended upon an exact equilibrium of the electric fluid being kept up within my system. I frequently found, on experiment, that if my pulse was languid, and my spirits depressed, my frame received with avidity (if I may so express myself) the electric fluid from any proper apparatus; but until about the years 1791 or 1792, I never contemplated that my health depended so much upon this fluid (if a redundancy of it was within me) being immediately ejected or drawn out.



Drawn by B. Ph. upon Engraving of the original specimen, by J. Smith.



In the fall of that period, for two successive days and nights, I felt feverish, with a total loss of appetite, a parched skin, with violent rheumatic pains in my head, breast, back and stomach. Late in the evening of the last day, being frosty weather, I drew from my pocket a new silk handkerchief which I had just purchased with some others of the like kind, then in another pocket; and as I entered my own door, being in great pain, I rubbed my head with it with much agitation and exertion, and immediately *perceived* and *heard* the electric sparks proceed from thence *most abundantly*. I then drew the handkerchief frequently through my hands from one extremity of it to the other, during all which time, *it*, or *I*, emitted a continued stream of *sparkling, crackling* and *audible fire*.

As soon as I entered my common back parlour, or apartment which my family usually occupied during the fall and winter, I luckily met with a number of my friends and connections, some of whom, it is true, were *juvenile*, others however were of *maturer* years and of scientific knowledge, to whom I communicated this remarkable phenomenon, and whom I requested to make the like experiment with the *handkerchief* which I had done. Accordingly several of them did so; but none of them having fever, any chronic complaint, or listless or restless moments, but being all in perfect health, (I repeat it) *none of them* did, or could produce the *like effect*.

An hour only elapsed, until I exhibited in the same neighbourhood, among three or four friends, the extraordinary manner (as already stated) in which I could emit the *electric fluid* through the medium of my *manual* operation on the silk handkerchief. At a small distance from the place of my last operation (if I may so call it), I met some others of my associates at the house of one of my most particular friends. At this place I felt *much better* in point of health, that is, my fever had considerably abated, the irritation of my nerves had subsided much, and my rheumatism (the principal cause of my complaint) was nearly removed; hence the *electric fluid* or *fire*, or by whatever other name it may be expressed, was not so

vivid or luminous or abundant as it had been, yet still I performed the operation as heretofore stated, while those in *good health* around me could not do so. On my return home the same evening, I felt myself perfectly relieved from fever and pain, and with all my repeated endeavours could not emit one single spark of electricity. From the foregoing data, my corollary is—"That good health depends much upon an exact equilibrium being kept up, of the electric fluid within our system." Whether any, or what effects may be produced from the relation of the facts which are here stated, I know not. My sincere wish is, that they may prove useful to those persons whose study and business it is to collect and apply such facts for the improvement of the healing art, and the benefit of mankind.

Account of the Efficacy of copious Blood-letting in a Wound of the Lungs, &c. By DR. HUGH G. SHAW.

Germantown, 24th February, 1796.

DEAR SIR,

I EARLY had it in contemplation to communicate to you the following remarkable case of a wound in the lungs, which came under Dr. Martin's and my observation, the last summer. Your late request to the Doctor, has confirmed me in my intention. I therefore proceed to lay it before you, relying on your usual candour to point out its imperfections.

Henry Oelman, an active man, about forty years of age, a native of Germany, on the evening of the 18th of June last, in attempting to jump from a hay-loft window into a waggon, fell upon one of the ledge-pins, which penetrated between the second and third false ribs of the right side, in an oblique direction upwards. The seat of the accident being at Mr. Abraham Rittenhouse's, two miles from Germantown, an hour had nearly elapsed before we saw him. On inquiring into particulars, his companions of the meadow informed us,

“that he had turned half round on the pin, in order to disengage himself, before they could relieve him; and that a stout man, with much difficulty, raised him off, supported in his arms”. On examining the wound and the instrument, we found it had passed eight-and-an-half inches, (that extremity being three and one-eighth inches in circumference) and, in its progress, wounded the anterior portion of the right lobe of the lungs.

This we were satisfied in, from plainly distinguishing with the finger, the lacerated parts, when we placed him in different positions.

The intercostal artery, although doubtless abraded, was not ruptured; the hemorrhage, however, was considerable. On withdrawing the finger, a great quantity of air rushed from the wound. Having made use of the common method of expelling the remainder of what entered there, we dressed it with a pledget of simple ointment. At this time, the hemorrhage externally, had stopped. He complained of violent oppression; his pulse tense and depressed, his breathing very difficult, though he spoke pretty distinctly. As quickly as circumstances would admit, we took thirty-two ounces of blood from him, after which he said he felt greatly relieved. In order to empty the intestines, he was afterwards ordered a smart purge. The next morning at five o'clock we saw him. His purge had operated, and he slept tolerably well the remainder of the night; but then complained of a severe pain and oppression across the inferior part of the thorax, as far as the *scrobiculus cordis*. The blood drawn the evening before was not remarkably fizy. I immediately took away eighteen ounces more: his pulse, which before was uncommonly tense, now became softer and fuller, and he said he was much easier. I discovered that one of the family, in order to gratify his accustomed fondness for strong liquors, and willing, as he said, to comfort him in his last moments, had given him a glass or two of spirits. We took the alarm, and determining to adhere closely to the antiphlogistic plan, strictly enjoined the necessity

of avoiding any thing the least spirituous, and ordered him to live on weak gruel, chicken water, &c. which I believe, except in one instance, was punctually complied with. I confess I was remiss in not enforcing this earlier. We immediately put him on the use of nitre and the vegetable acids. We were fearful of joining tart. emet. to the nitre, lest the quantity necessary to support a gentle diaphoresis, might excite vomiting. We ordered, as a laxative, occasional doses of the ol. ricini, which he said he could take better than any other medicine. At twelve o'clock, I found his pulse hard, accompanied with no small degree of dyspnoea. The seat of the most considerable pain was posteriorly along the lower false ribs. This I attributed to an accumulation of extravasated blood. I took away ten ounces, dressed the wound and found its appearance favourable. In the evening, I observed that the blood taken at noon was much more sily than either of the preceding. From this circumstance, and the still existing painful and oppressive symptoms, I was readily induced to repeat the bleeding to the amount of ten ounces. This bleeding, he said, sensibly relieved him, more particularly his breathing. Saturday morning, 20th, I found him much better; the wound discharging a laudable pus; his pulse pretty regular, breathing tolerably easy; almost clear of pain; his bowels quite free. I therefore did not bleed him, but I had afterwards reason to repent that I had not; for at twelve o'clock, a messenger came up and told me "he was dying!" I went down immediately, and found him in violent pain, delirious, with a quick tense pulse, and great difficulty of breathing. On applying the ligature with a view to take more blood, I was surprised to find that it would not flow as usual, from the first orifice; I immediately enlarged the orifice, to twice the size, when to my astonishment, the blood passed off in a thick and grumous state, with considerably large clots. I was convinced from this appearance, that a reabsorption had taken place. After losing twelve ounces he declared himself "another man." Dr. Martin in the evening found his pulse at 85, and full, his

appetite remarkably good, as from the beginning. He took away eight ounces of blood, still dark and grumous; and ordered him some fruit jellies. Sunday, 21st, His pulse unusually full and quick. On inquiry, I found that he had eaten meat, contrary to our strictest orders. I took away ten ounces of blood, which ran freely from the first orifice, and appeared much thinner than any of the preceding. He continued pretty easy all that day and the next, requiring only two small bleedings (sixteen ounces.) Tuesday, 23d, Rested very well the night before; his pulse soft and regular; appetite good; so well as to sit in a chair and have the wound dressed, which was now nearly closed. Wednesday, Continues free from pain, except a little in the right shoulder. Thursday, 25th, One of his friends came to me in a great hurry, and told me he was dangerously ill. On my arrival I found his situation truly alarming: a strong hard pulse, skin and tongue dry, violent pain in the head and breast, dyspnoea, delirium. On inquiring into the cause of this dreadful change, the family informed me, "that he had imprudently dressed himself, the day before, and sat by an open window, while it rained; that he frequently put his head out and got wet." I once more had recourse to the lancet, and took away twenty-eight ounces of the purple fluid; on which he exclaimed, "that he felt himself in a new world." In the evening he told me the mercurial pills I ordered had operated very well, but that he still felt a good deal of pain and oppression; his pulse full and veins turgid. I bled him twenty-four ounces, which instantly relieved his pain and oppressed respiration.

The two succeeding days passed without any symptom of danger or alarm. Sunday, 27th, Dr. Martin visited him; found his pulse full and about 80; had slept tolerably; the wound almost healed; took away ten ounces. At half past three I found him cheerful; his pulse 75; had two evacuations from having taken some castor oil in the morning. He said the only pain was two inches transversely from the wound. The blood taken in the morning contained a considerable proportion of

crassamentum, with but little serum. Half past nine, continues better, though there is a considerable degree of action in his pulse. He sat in a chair and was bled (ad deliquium) eight ounces, appearance black and grumous. His pulse rose considerably after the bleeding. Some pain still continued in his right shoulder. Monday, 28th, Complains of great weakness; pulse is quick, but not full. I took six ounces of blood away, after which he assured me he was entirely clear of pain, except, as he expressed it, "a little between the meat and the ribs;" the wound cicatrizing. The next day I found him sitting up, and in high spirits. He said he felt well enough to ride home, which was half a mile, and anxiously wished to obtain permission; this I peremptorily refused. I continued to visit him for three days. On the fourth I was much surprised, in passing his own house, to see him at the window. On my reproving him, he apologized, by answering, that he became impatient to get home to his family, and had rode up that morning without the least inconvenience. In twenty days from the accident, he made a pair of shoes. We have been under the necessity of bleeding him several times since, at seven or eight weeks interval.

Many cases have since offered, which indispensably required venesection; particularly that of Miss Norton, at the Rising Sun, who, in six days, lost one hundred ounces of blood: both tables of the frontal bone having been dreadfully fractured, by the oversetting of a chair.

Your assured friend
and humble servant,

HUGH J. SHAW,

DR. BENJAMIN RUSH.

On the Efficacy of Blood-letting in Rigidity of the Os Externum.

By DR. WM. DEWEES.

Philadelphia, April 1st, 1805.

DEAR SIR,

SOME time since, the editors of the Medical Repository,* did me the favour to publish a desperate case of midwifery successfully treated, by copious blood-letting: deeming the subject of some importance, and several similar cases having occurred since; I take the liberty of sending you three, selected from others of minor consequence, for your perusal. Should you think them worthy of a place in your useful Museum, I shall be gratified in having them thus distinguished.

WILLIAM DEWEES.

DR. JOHN REDMAN COXE.

CASE I.

ON the 12th September, 1798, I was requested to visit the wife of Samuel Griffith, in consultation with Dr. Jones. Mrs. G——, I was informed by the Doctor, had been in labour sixteen hours; the waters were evacuated early in her labour; her pains, frequent and brisk; but, there was not the least disposition in the soft parts to dilate.†

I sat down to examine our patient, and found the os externum scarcely large enough to admit the finger, and it was mount-

* Vol. 2d, p. 24.

† This patient, like the one whose case was formerly given, had suffered a laceration of the perineum to a very great extent; the parts after a considerable lapse of time healed up, but so unfortunately, as to almost entirely obliterate the vagina. I was called upon for my advice when in this situation, and found the case truly distressing; the passage or vagina was so contracted as not to exceed in size a common quill; the parts extremely callous; and a constant and profuse discharge of fetid acrid pus, kept the poor woman in a continued state of misery and ill health. My friend Dr. Physick was also consulted; by a persevering use of sponge tents, &c. the parts became sufficiently dilated to admit imperfectly the venereal congress; soon after she became pregnant, and the consequences of this pregnancy furnish the above case.

ed up closely against the symphysis pubis, in consequence of the perineum being very much distended by the head of the child. The os uteri was rigid and but little opened—a kind of bridle or small column of flesh ran from the inferior edge of the os pubis and lost itself in the perineum below; against this, the head was firmly pressed. The head was situated naturally, and so far advanced, that the vertex was about to emerge from under the arch of the pubes, covered with the uterus; it had been thus fixed for nearly six hours previous to my seeing this patient; and all that had been done, was, the occasional exhibition of tinct. opii. with steady pressure against the perineum to prevent the escape of the head through it. In this situation of affairs what was to be done?

My ingenious and much lamented friend Dr. E. Smith of New York, immediately after the receipt of my former case, suggested the trial of an infusion of tobacco in similar cases, to supersede the use of such extensive bleeding as had been employed in it; affirming its effects were very similar to those produced by copious blood-letting—such as nausea, vomiting, syncope, and consequently relaxation. The idea pleased me, and I was determined to employ it the first opportunity: the case under consideration I believed to be as favourable a one as could occur, and accordingly proposed it to Dr. Jones; he cheerfully acquiesced in its trial; a strong infusion was made of the tobacco, and a quantity of it with some difficulty, after several ineffectual trials, was thrown up the rectum. It produced great sickness, vomiting and fainting; but the desired relaxation did not take place; we waited some time longer, but with no better success. In the course of an hour or an hour and an half, the more distressing symptoms produced by the infusion wore off, and resolving to give the remedy every chance in our power, we got our patient with some difficulty, to consent to another application of it. Its effects were as before—great distress—without the smallest benefit; the soft parts remaining equally rigid, as before its exhibition.

Supposing the bridle just spoken of might have some influence on the developement of the external parts, I divided it, but without any evident good resulting from it. I now proposed the remedy that had so completely succeeded in a former case; bleeding nearly to fainting: this was consented to. We had our patient placed on her feet; taking care to have the perineum well guarded during the operation. Upon taking away about ten ounces of blood she became very faint;* she was immediately laid upon her bed; the most complete relaxation had taken place; the forceps were applied, and our patient was delivered in a very few minutes of a fine healthy girl. The mother was put comfortably to bed, and every thing went on in the ordinary way until the sixth day, when she was seized with a violent cholera morbus and convulsions, (to which complaints she was subject) and died in twelve hours.

* The subject of this case was a delicate woman, and went to become very faint upon the loss of a little blood. The disposition to syncope has frequently aided me in obstetric cases, where this state was an object in practice; it is well to inquire if this peculiarity exists, as, taking advantage of it, by placing our patients in an erect posture, we are enabled to effect by the loss of a few ounces of blood, what could not be obtained in a supine one by the loss of very many. This circumstance may also aid the timid practitioner, who may be afraid to venture on the great depletion that sometimes becomes necessary to produce this effect, when this situation is not attended to. I have therefore always placed my patients on their feet, when practicable, before I opened the vein. We may also spare ourselves a great deal of trouble, and our patients much anxiety, in cases of tedious labour, from the unwillingness of the soft parts to dilate, where this disposition to syncope from the loss of a few ounces of blood when in an erect posture obtains, by taking advantage of this peculiarity. Few women object to being bled during labour, nay, they for the most part think it indispensable when the labour has been protracted. The consent, therefore, of the patient and her friends is easily obtained; all we have to do is, to conceal from them our wish to have her become faint. Should she faint we can readily satisfy them, by calling to their recollection, it is common to her from bleeding, and that it will be useful to her. In this way, we can very often shorten a labour many hours, when we might not be able to obtain the consent of our patient, or we ourselves think it necessary, to bleed her to the extent of forty or fifty ounces.

This case, notwithstanding its ultimately unfortunate termination, fully establishes the influence of blood-letting in this very distressing kind of rigidity; and proves it to act differently from tobacco, notwithstanding the latter produces nausea, vomiting and syncope; and also, that, the quantity of blood lost in some instances may be very small, to induce the desired relaxation.

We conceive, that no possible blame can be attached to the bleeding in this case, as the woman was very brave until the sixth day, when, a disease, to which she was subject, supervened and carried her off.

CASE II.

ON the 26th September, 1800, I was called to the wife of Michael Falkrod at Frankford, in consultation with Dr. Ruan. She had been in labour twelve or fourteen hours, with her second child; * the pains frequent and strong; the waters discharged some time; the head was situated favourably, and completely occupied the vagina; the perineal tumour large; the os externum not larger than a common finger ring; admitting the finger with some difficulty in the absence of pain; during pain, thrown up against the inferior edge of the pubes in such a manner, as not to admit the finger or allow it to be retained if previously introduced. Externally, a strong cicatrix was found running to the very verge of the anus; internally, it could be traced further. This cicatrix prevented the unfolding of the external parts so effectually, that the repeated efforts of the uterus for several hours, were insufficient to make them yield, though the head had been closely applied to them during that period.

This patient was a strong healthy woman; considerable fever had been excited; the pulse, strong, frequent and hard.

* With the first, she had suffered an extensive laceration of the perineum. It is somewhat remarkable, that all the cases I have related, were in the same neighbourhood, and all had been under the care of the same physician.

I proposed bleeding ad deliquium, to which Dr. Ruan consented. We immediately opened a vein and took about forty ounces of blood, but as her pains were so rapid, we were obliged to take it from her in a recumbent posture, and no disposition to syncope was manifested. This quantity, however, had some effect, as there was evidently a beginning relaxation, and an abatement of the violence and frequency of the pains. We now agreed upon a second bleeding, and to have it taken in an erect situation. We with some difficulty effected this, when, upon taking five and twenty or thirty ounces more, she fainted; she was laid upon the bed, and in a few minutes, by the forceps, was delivered of a fine healthy boy. Our patient recovered rapidly without accident, or draw-back.

CASE III.

FEBRUARY 26th, 1803, 'I was called to the same woman in labour with her third child. The same circumstances attended, and the same remedy was employed, with a similar result. This case was witnessed by Mr. Bond, an ingenious young gentleman of Baltimore.

Two Cases of Worms in the Vagina, and in the Ear. From the manuscript Notes of the late DR. FRANCIS BOWES SAYRE.

I HAD one case of worms in the vagina. The patient was a child about two years old. There was considerable excretion of the parts, with a discharge from the vagina much resembling gonorrhœa. Some heat in making water, and a most troublesome itching. The complaint had continued several weeks when I was called upon. From the nicest inspection,

and most attentive consideration of these symptoms, I could by no means satisfy myself of the cause; however, as the child was otherwise in good health, I judged topical applications were alone necessary; and accordingly prepared a solution of saccharum saturni, and furnished the mother with a syringe, directing a little of the solution to be thrown into the part, and the excoriations to be washed with it four or five times a day. After using this remedy three days, small worms, resembling the maggots which are usually formed in cheese, began to come away, and continued to be discharged two or three a day, for many days. They were all dead when discharged, and that they came from the vagina, I could not doubt, as I took several of them therefrom myself, by means of a probe introduced for the purpose. When the worms were all destroyed, the discharge ceased, and the child was very soon after, perfectly well. This case happened in the year 1795 to a daughter of Mr. Andrew Nickell, in Nottingham, in the county of Burlington.

In the winter of 1794 I was called upon by Samuel Jones, a shoemaker in Crosswicks, county of Burlington, New-Jersey, for my advice in a case of deafness. This man had a discharge of fetid matter from the ear, a troublesome itching in the part, and had frequently taken worms out of the ear. Several more of these came away whilst he was under my care. They were about the size and shape of a grain of rye, of a light brownish colour, with several circular rings round the body. This complaint had been of some months standing when I was consulted, and though several remedies were employed in the way of injection, the worms continued now and then to make their appearance: the discharge was undiminished and the deafness remained. He was under my care about two weeks, during which time, the only benefit he received, was a diminution of pain. One ear only was affected.

*Case of a Worm discharged, apparently, from the Lungs. By DR.
T. WATKINS.*

Havre-de-Grace, 7th May, 1805.

DEAR SIR,

UPON looking over my common-place-book, I found an extraordinary case which I had recorded about two years ago, just as it had been told to me by the patient himself, and which you may think so uncommon as to deserve a place in your Museum.

A young man of about six and twenty years of age, who had been for some time in a state of extreme debility, with symptoms of a pulmonic affection, after an unusual exercise in gunning, was suddenly taken so ill, that his companions were obliged to support him to a house not far distant, where a strong drink of *grog* was given him, which seemed soon to revive him; but, on attempting to walk from the house, he was seized with an inclination to cough, and with a very slight exertion, threw up a *worm* of an uncommon appearance, about the size of the fore finger, of a dark reddish colour and rough surface, with a large opening, supposed to be the mouth, nearly in the centre. It had also numerous pedicles attached to the same surface with the supposed mouth, and lived after being thrown up nearly an hour. Nothing else was coughed up at the time, and the young man felt himself instantly relieved from an oppression he had long laboured under in his breast. I saw him three weeks after this circumstance; he had taken no medicine, was in a state of extreme debility, with a pulse scarcely to be felt even after the severest exercise: his breathing was very laborious, and the oppression at his breast returned upon the slightest fatigue; his appetite was generally good, but his digestion greatly impaired.

VOL. II.

P

Could this worm have been lodged in the thoracic cavity ? and if so, can a like occurrence ever be considered as the cause of phthisis pulmonalis ?

I have the honour to be,

Dear Sir,

Your obedient humble servant,

T. WATKINS.

DR. JOHN REDMAN COXE.

Account of the Bilious Remitting Fever of Virginia, &c. By DR. THOMAS W. SMITH, in a Letter to the Editor ; dated February 15th, 1805.

DEAR SIR,

I HEREWITH send you a theory of fevers, which I have drawn up from observation during the late fatal epidemic of Virginia. In doing this, I shall omit including any meteorological observations of the weather, or any account of the disease that does not appear immediately to interest my pursuit ; as I understand it is undertaken by a gentleman who, I believe is much more capable of the task than my youth and consequent inexperience will admit of.

If, in addressing this to the public, I should in any degree be the means of elucidating the subject, or removing the veil of obscurity with which it is invested ; or if I should add one Iota of defence to that dangerous bridge of mortality, through which thousands, for the want of proper medical aid, drop into eternity, I shall thank God, who, by the assistance of a meritorious physician, hath brought me forth to taste the fruit of knowledge, and view in splendor that extensive field of research which is now expanded before my eyes. But, if on the other hand no benefit should be derived therefrom, I trust I shall at least remain inculpable, and better satisfied than at present. As my abilities in writing are by no means adequate to the task I am about to undertake, and as my diffidence in exposing my language to the public is inexpressible ; I shall apologize for any deficiencies of execution by briefly observing,

that I do not deem the Medical Museum a repository of criticism, but of information.

In entering upon my inquiry into the theory of fevers, I shall in the first place observe, that, there is never an excessive action of the muscular or vascular part of the human body that is not succeeded by a proportionate degree of debility: which debility may very properly be defined indirect. Infection, or the exciting cause of fevers, does not consist in any particular or specific kind of stimulus; for as the bladder may be excited to pain and frequent micturition, the schneiderian membrane to sneezing, the lungs to coughing, the stomach and bowels to action, &c. by many stimulants of very different properties, (which they have not been reconciled to the impression of) yet all tending to produce one effect; so the heart and all the sanguiferous system may, *ceteris paribus*, be stimulated to excessive excitement by a variety of stimulants of quite different principles. Infection, which is the stimulus I intend chiefly to confine myself to, operates universally over the whole system. It is taken into the lungs in inspiration: it is imbibed and swallowed with the saliva: it is absorbed by the inhalent powers: and, lastly, it is applied to the mouths of the exhalent vessels, and assists in producing a spasm therein. In order to manifest the truth of this doctrine, it is only necessary to observe, that all the cavities of the lungs, stomach, &c. afford an accessible space, equal at least to the surface of the whole body. Exercise, though a stimulus to the heart, by propelling the blood thereto, cannot add any stimulant property to the blood except an increase of its temperature, which can seldom be sufficient to produce a fever; but we are not entirely without instances of its doing it, for I have seen parturient women seized with a violent sthenic fever, attended with a dry mouth and parched skin, apparently from no other cause than excessive exercise; but it cannot be of long duration. Spirituous liquors, opium, and every other stimulant power sufficient to produce a fever, will augment it in proportion to their stimulant energy, and continue it until their acrimony is

blunted by the fluids which they meet with, or until they are thrown out at some of the emunctories. Stimulants act most powerfully on the parts to which they are applied; yet, as in heating one end of a bar of iron, the caloric will insinuate itself through its whole substance; so in like manner, if a stimulus be applied to any one part of the human body, its effects will from thence be propagated over the whole system, and at the same time not unfrequently affect some organs more than others.

Infection is a substance, no matter whether it be the septic acid, hydrogen gas, other products of animal or vegetable putrefaction, or the moisture, and miasmata of marshes, &c. whether acting separately or combined, or whether they act alternately at different times, they have all a tendency to produce one effect. If taken in by respiration, it is received by the blood; if in digestion it is absorbed by the lacteals; and if by the inhalents, the arteries receive it. Thus we see that in whatever way it is received, it is ultimately conveyed to, and intimately intermixed with, the mass of circulating humours, and when enough accumulated, and in a degree sufficient, commences its direful effects. But there are many secondary causes which will facilitate its way to action previous to its natural course, which are now too well known to need mentioning. The disease being now well understood to depend entirely on a fault of the fluids, I shall proceed to consider the manner in which it is proximately occasioned and continued.

Besides the sympathy derived from the parts of its first entrance, where it produces heat and griping pains in the stomach and bowels, sometimes coughing in the lungs, and a fervid sensation over the whole surface of the body; it stimulates the heart and arteries to excessive excitement; and as the contraction of the arteries is well known to depend on the stimulus and velocity of the blood in them, it must appear exceedingly obvious to all unprejudiced minds, that although the propelling power, may, for a while, overcome the resistance of the exhalent vessels, and increase perspiration as exercise does, yet as the extremities of the arteries are by far the least,

and their irritability greatest, it is certain that if this action be extended to a considerable degree they must become entirely closed, a spasm produced, and perspiration obstructed; or if it is not entirely obstructed, it is so diminished that the excessive heat of the body evaporates it insensibly. And as the heart by its excessive action is the original and chief supporter of such a stage, it cannot continue long according to the laws aforesaid, before it is thrown into a state of indirect debility: the action universally subsides, the exhalents dilate, the mouth becomes more moist, a copious sweat ensues, and terminates the paroxysm.

Although the stimuli which produced the paroxysm, still continue to act, the excitement of the heart cannot again be raised, until it has by rest acquired an accumulation of excitability, or until a higher degree of stimulus is superadded. It appears from this, as well as from daily experience, that the more violent the paroxysm of a fever is, and the greater the debility produced thereby, the longer will be the intermission. I have said above, that the excitement of the heart after a fit cannot again be raised until the excitability is accumulated, &c. But in the remitting fever it appears that the excitability is not entirely exhausted, and that a sufficiency remains to support the continuance of some degree of fever, which is aggravated when the excitability or stimuli are accumulated. The exhalent vessels being the first organs that give way to indirect debility, so they appear to be the first to which the excitability is restored, and, by contracting, repel their contents from the surface of the body, and give to the heart the exciting cause of paroxysm (or the re-action of Dr. Cullen), whose excitability is now prepared to receive its impulse and commence its inordinate action. A vacuum being now produced in the extreme vessels, the circumambient air must consequently supply it; which gives the sensation of coldness and shivering, or what is called the cold stage. That the sense of coldness is derived from this cause is evident, from the ef-

fects of the atmosphere on a raw or inflamed surface.* This phenomenon is more apparent in intermitting fevers, in which (especially when succeeding to the remitting fever) the excitability is worn down to its lowest degree, the infection in a great measure evacuated, and the fits distinct. In some cases the excitability in the exhalents is very irregularly accumulated, for the chill sometimes commences in the feet and legs, sometimes in the face and breast, and very often runs in narrow streaks down the back, transferring the sense of cold water poured down it. This may in some measure be accounted for, by considering the situation and density of the parts in which the phenomenon most frequently takes place, their remoteness from, or proximity to the heart, and support from pressure.

Continued fevers constitute a middle degree in the scale of action, in which the exciting power continues to act and consume the excitability as it accumulates, consequently no distinct paroxysm or remission can take place.

That obstructed perspiration is owing to the cause aforesaid, viz. a preternatural stimulus of the blood or plethora of the extreme vessels, may be attested by infallible proofs. Thus venesection, by diminishing that plethora, will often produce sweat. The action of the excretories appears also influenced by the nervous power; for sleep, by calling off that energy and suspending the operation of the senses, will often have the same effect. The cause of that effusion consequent on the action of vesicatories being known, will also prove a fulcrum to the truth of this doctrine. Those, particularly flies, have generally been supposed to raise vesicles merely by increasing the action in the vessels of the part to which they are applied; a supposition as erroneous as it is absurd. Blisters cause an efflux of serum from the cutis, by producing indirect debility in the part to which they are applied. As a proof of this, I applied a blister plaster to my leg, and when I examined it three hours after, no

* Place the patient's body in a temperature equal thereto, during the cold stage, and the sense of coldness will vanish.

symptoms of vesication, but only a redness appeared; the skin was dry and parched. I removed the plaster, dressed with a dry rag, and upon looking at it, ten hours after, found, agreeably to my expectation, a large vesicle filled with yellow serum thereon.

Now, if vesicatories produce effusion merely by increasing the action of the vessels, why did not this vesicle appear while the flies were stimulating? I have also several times applied them to the legs of my patients in the last stage of fevers, which after remaining on all night, did not produce the least discolouration of the skin next morning, but on examining them in the evening I found (to speak vulgarly) they were well drawn. These are sufficient to prove that vesicatories produce a discharge from the pores of the skin in the same manner as febrile infection, with this exception, that the one is applied externally and the other internally. If a person who has been long given to inebriation, omits his dram a few hours, and suffers the stimulus thereof to subside; he is seized with vomiting, or a very copious sweat ensues, which can only be checked by a renewal of the stimulus. Does this not plainly infer, that the blood is driven towards the surface of the body by the stimulus of the spirits, and produces a plethora and approximation of the excretory orifices? Costiveness, which so frequently accompanies sthenic fevers, is the consequence of an increased action in the vessels of the intestines, closing the orifices of the exhalents that empty their contents therein. To enumerate all the circumstances that would embrace the truth of this doctrine, would far exceed the limits of this letter, and be an unnecessary expenditure of time. I shall now retreat, and take a more general view of the subject.

The remote cause of the bilious remitting fever which prevailed last year, appears evidently to have been the consequence of the memorable fall of water that appeared last summer. To describe the aspect of the earth in this awful scene, and to draw the melancholy portrait of animated nature in its proper colour, would exceed the power of human comprehension. The lives of many human beings were extinguish-

ed, immense numbers of quadrupeds were swept from their peaceful shores, and consigned to the disastrous torrent. The inundation embraced almost all the low land, and after its ebb, a vast number of reservoirs or pools were left to stagnate. The land animals which were drowned, together with an innumerable number of the aquatic tribe and rubbish, were left on the shores to undergo the putrefactive process. Large crops of small grain which had been spoiled by the wet, were left in the fields to share the same fate. No sooner did Sol once more send his welcome rays on the face of nature, than I began to anticipate with horror the impending event. The evaporation from an unbroken surface now commenced, and in a short time the atmosphere became completely saturated with the noxious products of animal and vegetable putrefaction; so much indeed was this the case, that at times it was evidently perceptible to the senses,* as was asserted by numbers. Its effects in the country were truly alarming; but in Winchester (where I then resided) very few were arrested by it, except those living in the suburbs of the city, or who made frequent excursions in the country. I am also informed that most of our sea-port towns were unusually healthy: the reason I suppose to be, that although the infection pervaded the whole region of the atmosphere within the limits of its existence, and consequently, was precipitated in a proportionate quantity on them, as well as on the country; yet as the streets had been in a great measure cleared of filth by the rain, and as it met with little additional stimulus, these could not prove sufficient to excite in so great a number of inhabitants, the utmost degree of its violence, though few (even in Winchester) will assert that they did not in some degree experience its effects. The smoke and heat of the town might also prove its antagonists.

* May we not suppose it extended its influence to the brute creation? as horses were universally affected with a cough. The putrefaction of vegetables, particularly cabbages, where the epidemic was most prevalent, was greater perhaps than was ever before known in this country; but elevated situations, where the disease did not reach, exhibited their usual salubrity.

When a populous city is seized by an epidemic with an exemption of the adjacent country, it must in a great measure be imputed to a local cause, the infection being confined within the verge of the city, as it is in valleys, morasses, &c. where it has this season developed its most fatal effects.

The cure of our epidemic was in most instances easily effected. I shall as briefly as possible describe the mode of treatment which I pursued, (after reconciling my theory to practice, which I did shortly after the disease began to spread.) If called at the beginning before any evacuations had been made, I always thought proper to clear the *primæ viæ* with a strong emetico-cathartic; or if the violence of the fever had not abated, a mercurial cathartic only, and the emetico-cathartic afterwards, which was repeated if the violence of the disease and state of the stomach indicated a necessity. In most instances the bowels were obstinately constipated (though sometimes the contrary); in which case, if the physic did not operate sufficiently in the course of twelve or fourteen hours, to prevent salivation it was necessary to work it off with a cathartic decoction, of senna and acidulated tartar. The stomach and bowels being now freed from their offensive load, were preserved in that state by gentle laxatives, combined with as much antim. tartari. as the stomach could possibly endure without exciting vomiting. These powders were alternated with a solution of carbonate of pot-ash in a decoction of Virginia snake-root during the remission, and a large dose of equal parts of laudanum and *spt. corn. cerv.* as two teaspoonfuls or ninety drops of laudanum alone, given at the first appearance of every paroxysm: the drink cool, the diet, though nourishing in general, not too stimulating, the room kept well ventilated, and the linen about the patient changed every other day. I applied a large blister to the neck, and when drawn, divided and applied it to the extremities. If delirious, the head was frequently bathed with cold water or oxycrate, which was of most service when applied by affusion. After a complete intermission was procured, the bark, or Fowler's solution of arsenic proved its specific. This was the mode of treatment

which I found most successful, when had recourse to in the beginning, before any thing occurred to vary the ordinary course of nature; but where the complaint had been long protracted, or the patient reduced by debilitating powers, the use of more powerful stimulants became then indispensable. The best of which were opium, camphor, volatile alkali, æther and distilled spirits. The body was also washed all over twice a day with equal parts of spirits and vinegar, and sinapisms were applied to the soles of the feet.

Under this mode of treatment, scarcely one that I know of, fell a victim to the jaws of that devouring cannibal. It is unnecessary to enlarge further on the treatment of our epidemic, as I believe little new has been displayed therein, my intention being only to describe a mode of practice which I have by experience found very successful, and explain the *modus operandi* of some of the medicines used. The most powerful febrifuge, after the irritation of the bile is kept as much as possible from the intestines, are sudorifics, of which antim. tartar. and spt. nit. dulc. are perhaps equal, if not preferable, to any. But in order to receive the greatest benefit from them, the patient's drink should be cool, and if possible, a stream of cool air kept constantly playing about the surface of his body: for heat being a stimulus, except it be applied very moderately, or intense enough to produce a species of indirect debility in the excretories, it will rather tend to impede perspiration than to promote it. Stimulants of the diffusive kind, in an early stage of the disease, can prove useful, only when given about the commencement of a paroxysm; when, by adding a stimulus to the cause, they will either bring about indirect debility, and consequently terminate the paroxysm much sooner, or they may, by partially exhausting the excitability, prevent the fit altogether. As a proof of diffusive stimuli not answering in the remission of the fever, I have given them at such a time, when they very soon increased the excitement, and hastened in a paroxysm prematurely, without any chill. The most powerful stimulant, as far as my observation has been able to teach me, is opium; and I may indeed be

greatly surprised when I reflect on its having been so much celebrated as a sedative,* when in truth there is not a directly sedative power in nature that I have yet observed. And any medicine exhibiting such effect, must produce it, either, by increasing the action in the vessels of the brain to such a degree as to obstruct the passage of the nervous power therefrom, by producing a species of indirect debility therein, or by restoring that equilibrium of action on which ease and sleep depend. But although the former may probably be the cause of morbid sleep, yet for the production of salubrious sleep, I have most reason to subscribe to the latter. I never could procure refreshing sleep when the excitement was already too great, until the effect of the medicine was diminished. On the other hand, when the action of the system was too low, and the excitability at the same time unexhausted, a very small dose of the medicine would almost instantly produce sleep of the most refreshing kind. I have also in one case where both the excitement and excitability were much exhausted, given to the amount of ʒiij . and ʒv . of purified opium in the course of twenty-five days, (I began with five grains every twenty-four hours, and increased to one hundred and eighty,) without raising the excitement to its natural standard, or creating much more sleep than nature solicited when the patient was in health.

Blisters have been extremely useful in this fever, especially when the patient did not sweat freely, when I thought it advisable to keep two or three constantly open. The benefit received from them in the first stage of the disorder was in proportion to the matter they discharged. But in a latter stage, when it assumed a more continued or nervous type, their stimulus was most to be revered. But to receive the greatest advantage from them in this way, they ought not to be suffered to lie on till vesication appears: to guard against which, as few stimulants will act with equal energy longer than two or at most three hours, it is perhaps as long as ever they should lie on, when

* Certainly the pulse must have been forgotten.

applied in order to stimulate; for as their stimulus will extend itself over the whole body, so may their debilitating effects likewise, and more than counteract the purpose for which they were intended. Spirits, externally applied, and sinapisms act in common with other stimulants, and prove extremely useful in an advanced period of the disorder, but are seldom admissible in the beginning, as they often in some measure interrupt perspiration.

Infection may exist long in the body if the accumulation be slow, or the proportion kept under by the means aforesaid. But whether it can produce a ferment in the blood, or not, I am doubtful, and whether a specific corrector will ever be found for it, I will not pretend certainly to say; but from considering the many and different kinds of it, and their prevalence at different times, we may reasonably suppose there will not. And should any power prove sufficient to mollify or neutralize the infection at one time, it may have a quite contrary effect at another. Therefore, since it is perhaps impossible ever to investigate the true and chemical properties thereof, it can never be proper in any case to trust to any particular medicine for a cure, without other efforts at the same time to expel the cause from the body. The different kinds of fevers under the names of yellow, bilious, remitting, nervous, &c. are no more than different modifications of one disease, as a typhus gravior frequently exhibits each of those characters distinctly, in its various circumvolutions. With respect to their being contagious, it is too simple a problem to require one minute to solve. There have as many escaped who have formed part of the number of a numerous family, and been constantly exposed to its influence, as there were of those who had no opportunity of receiving the human contagion. There is not a doubt, but in jails, hospitals, or close houses, the air by being confined becomes more strongly impregnated; but this is all that can be advanced to vindicate the contagion of fevers. The exciting or secondary causes are innumerable: the accumulation may take place to a considerable degree, if none of those causes occur to

rouse it into action, and yet be attended with very little injury to health, except at times a pain in the head, stomach, back, &c. But in those cases the attack is generally more violent; consequently no good reason for too strenuously avoiding them.

Few cases of the black vomit, or ejection of matter resembling coffee grounds, have appeared in this country, nor did the pulse often indicate much inflammatory diathesis: but when it was the case, the use of the lancet was scarcely ever admissible. Nay, God forbid it! for instead of a lancet, it has proved a fatal sword to hundreds.

I have not seen a single case wherein venesection was performed to any extent, that did not recover with difficulty; neither did I perform the operation more than thrice, before I detected the evil, and all the patients I bled afterwards were three out of several hundred. In those, the violence of the disease appeared to threaten the immediate destruction of life. The consequence was, that one of them died, and the rest recovered with difficulty. One case in particular is worth mentioning. I visited a woman, aged 45, who was violently attacked; she was much disposed to obesity: after the first remission, which was pretty considerable, she was bled to the amount of sixteen ounces; the fever very shortly assumed a continued form, and as one paroxysm produced very little debility in the exhalents, the stimuli of the remaining blood and febrile infection acting gently, kept them closed, and no sweat ensued: the most powerful sudorifics, as the warm bath, &c. were tried to no purpose; I endeavoured to procure a remission by purgatives, but could not. At length observing that as the depletion was great, and the patient now much debilitated, this course was no longer safe, and as I also found there would not be stimulus enough added to the remaining blood, to produce another paroxysm sufficiently energetic to supersede the excitability of the exhalents, and produce further debility therein; I determined to replete the vessels as speedily as possible: accordingly, wine, rich soups, jellies, &c. were prescribed in as large quantities as the stomach could endure. This regimen was not long per-

sisted in before I was gratified with the sight of a remission—the pores were opened, and my patient from that time mended. As a tense or inflammatory pulse indicates nothing more than a powerful or noxious stimulus, it is hard to say how far it is expedient in any case, to hazard the danger of venesection for an uncertainty: for it can in no way extract the stimulus of infection from the system, than in proportion to the quantity of blood drawn.

On the Use of Spirits in Diarrhœa, &c.

I HAVE observed more benefit from the use of distilled spirits in inveterate diarrhœas, than from all the other medicines of the materia medica. It should be repeated so often as to keep up a constant stimulus, viz; at least every two hours.

The benefit of seneka in the whooping-cough, I have not found equalled by any other medicine. It should be prescribed nearly as for the croup, viz. as a constant stimulus in the fauces and œsophagus.

Having traversed the limits of this undertaking, I shall conclude by stating, that if these lines should in the least degree meet the approbation of the public, I shall think it my duty to enlarge them with such necessary notes as may occur in my future practice.

I am, with sincere respect,

Your friend and humble servant,

THOMAS W. SMITH.

DR. JOHN REDMAN COXE.

Some Account of Batavia, and of the Sources of its unhealthiness.
By STUBBINS FFIRTH, M. D.

Batavia, December 4th, 1804.

SIR,

TO aid you in your very laudable endeavours for the promotion of science generally, and of medicine in particular, I offer the following account of this distant and very sickly place, which you are at liberty to make use of as you think proper.

Batavia, the capital of Java, lies in lat. $6^{\circ} 10'$ S. and lon. $106^{\circ} 50'$ E. It is situated in a plain on the northern and western part of the island, and near the streights of Sunda. The city is regularly laid out, the streets are wide, and cross each other at right angles. The principal streets have canals running through them, and are adorned with trees in some places. The small river —, rising in the mountains, and receiving in its descent the tribute of smaller rivulets, descends through the plain, washes the walls of the city, and its waters are conveyed by the different canals through every part thereof, as well as of the suburbs, finally emptying itself below the town into the port. Between the port and the city the land is a low, sunken meadow, part continually overflowed, and part covered every high water: back of the town the lands are also low, and in many places there are stagnant pools of water. The canals run through every part of the plain, frequently intersecting each other, and exposing a very great surface to the action of the sun. The walled city is kept pretty clean, but the suburbs in many parts are very much the reverse: into the canals all the filth and dirt are cast; they are the receptacles of all the animal and vegetable offals, the cleansings of the streets, all the dead animals, and dead Malays, &c. so that all these passing from the large suburbs through the city, contaminate the air, already much vitiated by its own filth, and by the want of a free circulation, which is prevented by the high

walls surrounding it on every side, and produce an atmosphere pregnant with the seeds of disease and death. Even the sea breeze, which in most places is healthy, is here the reverse; for it has to pass over a large tract of low, uncultivated, sunken and marshy ground, which, from the pools of stagnant water and putrescent matters on many parts of it, emits a gas deleterious to animal life. Most part of what is not covered by pools of stagnant water is overflowed daily by the tide, and at low water exposes a large surface of mud, &c. to the almost perpendicular rays of an intense sun. The exhalations arising from this ground are very noxious and disagreeable, and have frequently, I believe I may with safety say always, produced in me vertigo and nausea when exposed to them early in the morning; and ophthalmia was several times produced by them. In going up the canal from a ship lying in the harbour, you are certain to meet large quantities of putrid animal matters floating down: what with the sight of dead Malays, in every stage of putrefaction, and torn in pieces by the alligators; the dead horses, cows, &c. producing an intolerable stench, and the emanations from the banks of the canal, and the meadow already mentioned, combined with the intense heat of the sun, and its reflection from the water, you are certain to have a considerable degree of nausea, with head-ache and great languor produced. Strangers universally complain of the same effect being produced, and although it is less perceptible the longer they remain at Batavia, yet its deleterious effect is not less hurtful, until they become seasoned to the climate; and even then, on the slightest irregularity, they are sure to suffer, as it only requires an exciting cause to produce the disease at any time; and in persons not accustomed thereto, it is so powerful as to act not only as a remote, but as an exciting, and, by producing debility, as a predisposing cause also. Strangers who commit a debauch, or who are much exposed to the direct rays of the sun, generally are attacked. With respect to the great mortality amongst the seamen, from northern latitudes, it is easily accounted for. It is a custom amongst

those mariners, and especially the Americans, to devote a day to pleasure (as they term it) in every port they go to. This is a privilege which they will by no means give up, so that the commanders of ships, however unwilling, are obliged to submit to it. When they go on shore in this manner, a number of them are together; they commit great irregularities, and get intoxicated, expose themselves to the intense rays of a tropical sun, wander about the streets and suburbs, spend the night in drinking, dancing, carousing, &c. or lie asleep in the open air, exposed to the dews and vicissitudes of the weather, by which means they generally receive the seeds of disease, and are soon taken ill. These irregularities would be sufficient to induce disease in any country: how much more in so baneful a climate as Batavia, when exposed to the other circumstances already enumerated? It accordingly happens that the men sicken very fast after being thus exposed, especially if they are obliged to work hard for a day or two afterwards. And as ships generally sail the day after the men have been ashore on liberty, whereby they have to exert themselves considerably in weighing anchor, making sail, &c. and if the monsoon has set in, are much harassed and exposed in beating through the streights of Sunda, as it requires all hands to be on deck constantly, and perhaps for several days; they have little or no rest, and are continually wet, fatigued, and almost exhausted by their exertions in working the ship, whereby they sicken daily and die very fast. Large ships, to avoid this, go through the Java sea, and pass between Bali and Java through the streights of the former. Here also they are sometimes obliged to beat through, and in running along the coast of Java and Madura, before they arrive at the streights of Bali, they are sometimes becalmed for several days, during which the dysentery and fever break out and spread rapidly, attended with great mortality. As in this passage they frequently stop at Balam-buan to procure water and refreshments, the men are again exposed to the baneful influence of the miasmata arising from the rice grounds, the shores of the streights, &c. &c. with the

fatigue of watering, which acts as an exciting cause; so that disease makes great progress, and instances have occurred where ships (soon after proceeding to sea) have lost four-fifths of their men, and been obliged to put into the first port they could make, to get hands to work the vessel home. Fortunately, however, for the mercantile interest, such cases are not general, although it rarely happens but what most of the men have an attack of disease before they arrive at the port of destination; particularly in large ships that are under the necessity of lying a considerable time at Batavia to load, where consequently the men being more exposed, have their systems greatly impregnated, I might almost say, saturated with the deleterious miasma, which only waits for an exciting cause to give it activity, when it soon produces direful disease, that often hurries the miserable patients to that "bourne, from whence no traveller returns." Sailors who are prudent, and do not leave their ships, are not so liable to be attacked, especially if they avoid the night air, and do not sleep upon the decks. The disease (i. e. the fever) is certainly local, being engendered by the causes already mentioned, and is *never contagious*. The people here, have no idea of the fever being *spread or communicated by contagion*; yet if this fever was to prevail in the sea-ports of the United States, it would be called *malignant fever*, and said to be *very contagious*. It shews many of the symptoms of the yellow fever of America; and perhaps the only reason they are not exactly alike, is the difference of climate, &c. for it is equally, yea, more malignant, in many cases. In Batavia every person says it is *not contagious*; in America, a disease *nearly similar*, if not the same, is *said*, by *many*, to be *decidedly contagious* and imported. If it is not contagious in Batavia, can it be so in America? If it arises from local causes in the one place, why may it not in the other? The laws of *nature* are *immutable*, they are alike in every situation. If the disease is not contagious, and arises from local causes in one country, or one part of the world, *it must* in every part in which it prevails: if certain circumstances will produce it in *one place*, similar ones will pro-

duce it in another. They will in any place, in every place, no matter whether in the torrid or temperate zones.

With sentiments of the most profound respect and esteem,
I remain, yours, sincerely,

S. FFIRTH.

DR. JOHN REDMAN COXE.

Observations on the Eruptions in the Vaccine Disease. By DR.
TOBIAS WATKINS.

Havre-de-Grace, 9th June, 1805.

DEAR SIR,

THE enemies of vaccination, think they have one unanswerable objection to the preference of that disease to the small-pox, namely, the eruption which, it is contended, is so common a consequence, and which is even more troublesome and more dangerous than the small-pox itself. It is the duty of every unprejudiced person to give his testimony against objections so unfounded, and to remove, as far as in his power, every obstacle to the universal adoption of a prophylactick, which promises so much benefit to mankind. Under this conviction I have thrown together a few observations, the result of my practice this spring, and should they tend in the remotest degree to preserve a single being from the variolous infection, my ultimate object will be attained.

Early in March I obtained from the hand of a gentleman, who had *previously* had the *small-pox*,* a portion of vaccine virus, with which I vaccinated nineteen persons. On the second

* A Physician of this neighbourhood, who afterwards assured me, that he had every symptom of having been *constitutionally* affected—as fever, inflammation, the peculiar formation of the pock, &c. I have made the experiment on myself, with variolous matter, *three* times, and had every symptom of the disease as violently each time as at the first, except that the eruption was confined to the inoculated part.

and third days, their arms exhibited a fallacious appearance of infection, which was entirely removed before the fifth day, when I found that it had taken effect in one only, a child, who afterwards had every characteristic of a true disease. Unwilling to trust a second time to virus under such circumstances, I procured it fresh from a child (who had been vaccinated with matter, received from a physician of respectability in Philadelphia) and succeeded in communicating the disease to the remaining eighteen, all of whom passed through it without one troublesome symptom, except one of my own children, who during the whole of the eleventh day had a high fever, with considerable inflammation and swelling, extending the whole length of the arm, which however entirely subsided before the next morning. About ten days after the scab had fallen off, an eruption of the erysipelatous kind made its appearance on the same child, with several large tumors on the back of the neck, filled with dark grumous blood. This eruption caused no other inconvenience than making the child fretful, from not being suffered to run about as usual, and was entirely cured in a fortnight, by the use of sulphur night and morning. It however, unfortunately served to deter several parents from having their children vaccinated; in vain I endeavoured to persuade them that so far from its being a common or natural consequence, this was the *only* instance out of *nineteen* who had been vaccinated at the same time: and a neighbouring physician assured me, that among a *larger* number of his patients, not the slightest appearance of subsequent eruption or other disease was observed. I had a happy opportunity of witnessing the *beneficial* influence of *vaccination* on the *constitution* of one of my little patients, a girl between three and four years of age, who had been nearly all her life afflicted with a complaint in her bowels, which kept her in a constant state of debility and emaciation. She had been under my care for the last eighteen months, and had tried a variety of medicines, with no permanent advantage; since being vaccinated, she has recovered her health in a surprising manner: from being pale, puny

and sickly, she has become quite fat and ruddy, and in every respect as hearty a child as her parents could wish.

It gave me considerable pleasure to find, in the last number of your first volume, a corroboration of opinion with respect to the necessity of the kine pock, becoming a constitutional disease before it can prove a preservative against the variolous infection. It was under this impression I persisted even to the fifth time in vaccinating one of my children (the same before mentioned), who continued to scratch his arm whenever the pock began to form, the effect of which constantly was, that in two days after every appearance of it was obliterated. There is one instance here, in which I have not been able to succeed in communicating the vaccine even after ten trials,* and with the matter in three different states, the scab, preserved between glasses, and taken fresh from the arm. I have yet had no opportunity of trying the variolous, but have not a doubt that the patient will prove equally unsusceptible of that contagion.

I am, dear Sir, very respectfully,

Your humble servant,

T. WATKINS.

DR. JOHN REDMAN COXE.

*History of a Case of Tinea Capitis cured by Vaccination. By the
EDITOR.*

ELIZA MOORE, a mulatto child of two years of age, was brought to me March 28, 1804, for advice in an obstinate case of *tinea capitis*, which had succeeded a sudden suppression of a discharge from the ears, and had now continued nearly seven months. Little or nothing had been done for the

* These trials were made three successive summers.

child, and the disease had extended itself over the whole head, which had acquired an unpleasant appearance and smell, from the matting together of the hair by the discharge, and want of due attention to it in point of cleanliness. As the small-pox existed in the neighbourhood, and in the very house where the child resided, I told the mother it would be proper first to vaccinate her, to secure her from that disease, before we attended to the complaint of the head. I had another object besides this in view, which was, an expectation of the tinea being removed by the operation of the vaccine on her system. I therefore vaccinated her by two punctures, and directed the mother merely to wash the head with soap and water. This attempt failed—and also a second on the 2d April: a third on the 5th proved more successful, and the disease advanced with perfect regularity, though slightly retarded by early rubbing. It soon however resumed its genuine appearance, and the areola was perceptible about the end of the 10th, or beginning of the 11th day, attended by a slight degree of fever: at this period, an evident alteration in the disease of the head took place. It began to dry up, and in a few days the discharge from the ears recurred; by the time the scab was perfectly complete, about the 15th or 16th day, the disease was nearly gone; the incrustations having come away in large pieces—leaving the head perfectly sound beneath. The running of the ears in a few weeks was suspended, without any recurrence of the tinea; and the child continues perfectly well to the present time. After the 9th or 10th day, I desired the mother to expose her as much as possible to the small-pox. This she did with no effect from it.

Philadelphia, April, 1805.

An Account of a Case of Uterine Hemorrhage ; and the Delivery of four Children at a Birth. By DR. JOSEPH L. THOMAS.

Quakertown, Bucks County, June 20th, 1805.

SIR,

HAVING observed by perusing the Medical Museum, your assiduity in collecting the most efficacious modes of treating diseases, and all such important cases as occur to practitioners, which would be useful, in improving the science of medicine ; I am induced, from the general invitation given, to communicate the following singular case that occurred to me, June 16th, 1803, merely to shew the possibility of nature far exceeding the narrow limits of mankind's increase by one or two at a birth.

I was called upon to visit Mrs. L——, of this county, being then pregnant the fifth time ; I found her in an extremely debilitated state ; being reduced by a severe flooding that had taken place twenty-four hours before I came. It was first occasioned from an injury she received eight days before, by a sudden jolt, being almost thrown from a horse, which caused immediate pain in her back, and a slight hemorrhage from the uterus ; but on the 13th she was so well recovered as to be enabled to walk out to her husband, working on the farm. It being a very warm day, the heat, and the exertions and agitation of body in walking, brought on a return of the complaint more severe than at first. A midwife was called upon, and every mean was used to check it, without effect, until the person appeared to be sinking fast. On the 14th I found her so reduced by the loss of blood, and the hemorrhage still continuing at each slight pain, occasioned by the small beginning of the uterus to contract ; with extremities cold, and the pulse scarcely perceivable, as to make the case appear very doubtful.

I did not make any examination, being informed that she (by her reckoning) was between her seventh and eighth month ;

and not observing any certain symptoms of labour, and considering nothing forward of that kind, I thought it proper to keep her in the most perfect tranquillity possible. I ordered warm flannels to the extremities ; at the same time a bladder filled with cold water, with some crude sal ammoniac dissolved in it, was applied to the pubes. I then gave her small and repeated doses of pulv. ipecac. comp. designing it as a gentle sudorific anodyne, rendering the circulation more uniform and equable. In a short time all the alarming symptoms began to abate, and she became composed ; a gentle moisture and warmth were felt over the extremities and system in general ; the slight contractions of the uterus moderated, and the hemorrhage almost ceased. I then examined by touch, and found a small dilatation of the orificium uteri, but nothing presenting ; she remained easy and composed ; all the symptoms were favourable in the evening, and her strength gradually returning, enabled her to take at different times some weak nourishment.

It being a number of miles from the place where I live, I was fearful that my returning home at that time might prove unfavourable to the safety of the woman ; expecting that if a return of the complaint should take place, the life of the person would be in imminent danger, if there should be no one present to effect a speedy delivery ; as I suspected a partial separation of the placenta to be the cause.

I stayed there during the night ; and next morning was awakened by one of the persons present, and informed that a return of the flooding had taken place, and that she complained of bearing down pains with regular intervals. By the touch I found the orificium uteri considerably dilated, and a small portion of the membranes presenting ; I then proceeded to expedite delivery as soon as possible. The feet presented, and by an attempt they were brought down ; the contractions of the uterus then increased ; and as soon as the child entered the passage completely, the hemorrhage ceased, and she was delivered in the usual time required in such cases. Having separated the

cord I found that the placenta could not be brought down by gentle means, and the size of the abdomen being very little diminished, made me suspect another child, and on examination I discovered that my apprehensions were well founded: regular labour-pains came on, and she was delivered of the second by the feet. I still found that the bearing-down pains continued; and the placenta resisting being brought down, together with the bleeding of the cord, after the usual time, and the size of the abdomen but little diminished, made me suspect the third; she was in a short time delivered of the third male by the feet presentation, (the three being attached to the one placenta), it then came away without any difficulty. By the size of the abdomen there was reason to suspect the fourth. She was, however, so extremely reduced, as to make me fear for her safety. Regular pains soon recurred afresh, which induced me to delay placing her in bed. By examining I found the membranes of the fourth child protruding, and she was delivered by a natural presentation of a female child with its placenta. The placenta to which the three males were attached, was much larger than the other. The four were born alive, but lived only a short time. The males appeared to be nearly of the same size; the girl was not so large as the three sons.

A person seeing them afterwards, was so curious as to measure them, and found the largest to be seventeen inches from the top of the cranium to the soles of the feet.

She was, from extreme debility, restored to a moderate state of health; she became pregnant again, and was delivered of a male child in about fourteen months after the former singular case. The mother and child are in good health.

I am, sincerely,

Your well-wisher,

JOSEPH L. THOMAS.

DR. JOHN REDMAN COXE.

VOL. II.

I

*Outlines of a new Theory of Chemistry. By N. C. VAN ECKHOUT :
—communicated in a Letter to the EDITOR, from THOMAS
DANCER, M. D. of Kingston, Jamaica ; dated April 21st, 1805.*

THE new theory which I am about to propose, respecting the elements that compose all the substances in nature, may perhaps occasion some surprise, as it differs very materially from any other hitherto received ; but although it may at first sight seem to militate against the established principles of Lavoisier, and other celebrated chemists of the present age, it is however, the result of inquiries I have been led into by their sublime discoveries. Far be it from me to suppose that I can eclipse the fame of these philosophers. If I have the good fortune to hit upon any thing new, the merit belongs to them, as it is by the light of their discoveries that I have been conducted. Happy should I think myself, could my researches contribute in any degree to the advancement of science, or the good of mankind. I have examined, with the greatest attention possible, the several substances entitled to be termed elements. To gain the end proposed, I have tried many new methods ; but I have applied myself particularly to the analysis of those bodies that are in general considered simple, and have found that many of them are not so, but compounded of several elements ; thus hydrogen is (I am convinced), composed of two substances, of which one is *carbone*, in a particular state, and which in this work is termed volatile carbone ; the other substance entering into the composition of *hydrogene*, is what I shall denominate *alkaligene* or the base of alkalies of every kind. Having made this discovery, I have been led on to others no less interesting, and which serve to explain a variety of phenomena hitherto difficult to account for. In my researches, I have been obliged to desert the road laid down by others, and pursue a new one, which has led me to the conclusion, that there are but *four primary elements*, and that these, variously combined, constitute all the sub-

stances, animate and inanimate, upon the face of this globe. These four elements are, *oxygene*, *alkaligene*, *carbone*, and *azote*. These, in the state of gas, are perfectly homogeneous, but it is difficult to find any of them separate. Every substance in nature consists of nothing but the four primary elements before mentioned, in different states of combination. When these elements are found in bodies in a certain proportion, they are with difficulty separated. Such bodies are hardly to be decomposed by analysis, because their natural attractions are not to be disturbed; and these may be called the *ne plus ultra* of chemical combination.

A combination of only two or three of the elements is more easily changed, as the law of attraction by chemical means can be made to take place; they are each of them for the most part combined with others, for which they have the greatest attraction.

In combining with each other, they are capable of assuming seven different forms, viz. 1st, solid; 2d, concrete; 3d, liquid, or hydroform; 4th, natatilis atomiform; 5th, volatilis atomiform; 6th, gaseous; 7th, elementary gaseous. The primary elements have among themselves a mutual attraction.

They have, 1st, an homogene attraction; 2d, an heterogene, or an attraction of obligation; 3d, an elective attraction. By these several species of attraction with which the elementary particles of bodies are endued, all the substances with which we are acquainted, are formed, either by nature or art. *Oxygene* and *Alkaligene*, I consider as the primary, principal, or chief elements, or those which have the chief operation in the formation or disorganization of bodies, and I look upon *carbone* and *azote* as the satellites of the former, or subordinates to them; but though subordinate, *necessary*, as without these, the former would have no activity.

These four elementary substances, viz. *oxygene*, *alkaligene*, *carbone*, and *azote*, can each of them exist in three forms that are visible, and four invisible; the three first are, 1st, solid, 2d, concrete, 3d, liquid. The four invisible are, 1st, the

natatilis atomiform, 2d, *volatilis atomiform*, 3d, the compound gaseous, 4th, the elementary simple gaseous.

1st. By a solid, I understand every substance the particles of which cohere, and which is not easily acted on by chemical agents.

2d. By a concrete, I understand every substance the particles of which, in some degree, cohere; but which, notwithstanding, is easily acted on by acids or fluid alkalies, the solution being transparent.

3d. A fluid need scarcely be defined. Fluids are aqueous, spirituous, &c. and are always within a few degrees of the same temperature as the surrounding atmosphere.

4th. The *natatilis atomiform* state of bodies is that of solution, when the particles of a concrete substance have united with the liquid solvent, without disturbing its transparency. All saliform bodies, are of this state of *natatilis atomiform*.

5th. The *volatilis atomic* state of bodies is that, in which the particles are extremely fine, so as not to disturb the transparency of the atmosphere.

6th. The compound gaseous state of bodies is that, where different gases are mixed or combined together under various denominations.

7th. The simple gaseous state is that, where the prime elementary gas exists by itself uncombined.

I consider attraction as the first cause of motion, and motion as the first cause or generation of heat or caloric, which, whenever developed, is a certain sign of some change in the composition of bodies. It is in the deflagration of combustible substances that caloric is resolved in the greatest quantity, &c.

Oxygene. I consider oxygene as one of the primary elements, there being two elements of a secondary order, viz. carbone and azote.

Oxygene I look upon to be the agent which developes or engenders light, and as the cause of transparency in all diaphanous bodies.

It can exist under all the different forms before described, solid, concrete, &c. Moreover, oxygene combined with azote,

in various proportions, constitutes, all the different acids, which are stronger or weaker as they contain more oxygene and less azote: oxygene being the cause of light, may be named *phos-oxygene*.

In the different sections of this chapter, in my proposed treatise, I have given an account of the principal combinations of oxygene and azote. I have considered azote as a secondary principle, and a satellite, or intimate attendant on oxygene, for it hardly ever abandons it; it enters into most of the combinations of oxygene, under the different forms of which oxygene is susceptible; when united with alkaligene in a gaseous state, it forms volatile alkali, either concrete or solid. Azote united with oxygene in a certain proportion, and in a gaseous state, forms all the acids. It is this principle united with the carbonic gas, that constitutes the different odours; it therefore may be called *odorogene*.

Alkaligene I consider as the other primary element in the first order: and as the name imports, it is the base of alkalies in general, caustic, or mild, according as they are united with more or less carbonic acid gas. The less an alkali contains of this, the more caustic it becomes. The carbonic acid gas should be named *oxy-carbone*, because it is formed of oxygene and carbone, and principally of the former.

I consider the oxy-carbonic gas as being always developed by some particular movement or attraction, and that it is never disengaged without the production of caloric, as we see in defflagration, fermentation, &c.

Oxy-carbone in a gaseous state is, by caloric, rendered the most expansive and penetrating of any gas known. It is this which occasions the breaking of glass vessels, when all the particles are not heated to the same degree at the same time.

When this gas is rarified to a certain degree, it loses all its specific gravity, it penetrates and passes through all bodies, and so becomes the vehicle or dispenser of heat or caloric.

Carbone may then be termed the principle of heat, *thermogene*.

In my chapter on this subject I have shewn all the principal forms of which carbone is susceptible, in combination with the other elements.

The several elements have different degrees of attraction to, or for, each other, and undergo various metamorphoses by their different combinations, and occasion a series of surprising phenomena hitherto unaccounted for. These attractions were the first cause of movement among the particles of bodies, and perpetuate it; occasion a developement or evolution of caloric; the composition and decomposition of all bodies whatsoever; and form the infinite variety of compound matters in nature.

I persuade myself, that when the foregoing theory is examined and better understood, it will be found to throw a new light on chemistry and medicine.

Observations on the Use of Nitric Acid in Hepatitis. By
S. FFIRTH, M. D.

SIR,

THAT hepatitis is a frequent and troublesome disease in the East-Indies, is a fact long known; that mercury is almost a specific for the cure thereof, is also equally well known; but practitioners are fully aware that cases have, do, and may again occur, in which it would be improper to use this "Sampson of the materia medica;" and that, owing to the prejudices of patients, it cannot sometimes be administered, when no other impediment to its use exists. It becomes therefore of consequence to be acquainted with other articles that may be equally efficacious to exhibit in these cases. Of the numerous articles which have been tried, none have evinced such powers as the nitric acid, and none have performed such wonderful cures. The attention of medical men was called to this subject some

years ago, by Dr. Scott, an eminent practitioner at Bombay; but I do not think that his representations met with the attention which they so deservedly merited. I am convinced good nitric acid is one of the most valuable articles of the *materia medica*, and may be used with great advantage in *almost every* disease in which *mercury* is now given; and owing to its great tonic powers, it can be used in cases where the debility is so great as to forbid the use of the latter; and in hot climates, where great debility attends every disease, this virtue renders it the most valuable article the physician can prescribe. In cases of hepatitis, where the patient has a scorbutic habit of body, (and these cases are frequent amongst seamen in long voyages) the nitric acid can alone be used with success. It should be of the best kind, as I have found the common aqua fortis of the shops not to answer so well on several accounts, and it always contains a portion of muriatic acid, which is injurious in these cases. At first it should be given in small doses, frequently repeated, and largely diluted with water, and the dose gradually enlarged as circumstances may indicate the necessity thereof. After continuing the use of it for some time, the mouth becomes affected, the salivary glands enlarge, their secretion is increased, the gums swell, become sore, and a disagreeable taste is complained of, a slight degree of feator is produced, but very different from that which is occasioned by the preparations of mercury—the pain of the side abates, and gradually becomes less troublesome, until it is felt no more, the pain in the shoulder subsides, the enlargement of the liver, which had previously taken place, ceases to proceed; it soon decreases to its natural size, and with it the nausea, oppression, and all the other disagreeable symptoms; the patient improves in health and strength continually, and from being debilitated, infirm and wretched, becomes healthy, vigorous and cheerful. The ptyalism produced is not so disagreeable as that arising from mercury, and is never followed by pains in the limbs; neither does it induce a predisposition to rheumatism, as many contend mercury does. It at the same time cures the scorbutic

habit the patient had contracted; but if the scurvy had broken out and made much progress, it will not effect a cure: the most in these cases that can be expected, is, the cure of the hepatitis, and the preventing the farther advance of the other symptoms, which can alone be cured by limes, lemons, and oranges, or living on fresh provisions. But certainly to cure hepatitis in a scorbutic patient, by nitric acid, is doing a great deal: mercury, in such a case, would only increase the symptoms, and hasten the fatal termination thereof. I have used the nitric acid with the happiest success in a number of cases, one of which I will relate.

William Woods, a seaman of the *China*, had an attack of the malignant fever soon after the ship left Batavia, of which he recovered, but continued very weak and feeble for a considerable length of time. During the passage between Balambuan and St. Helena, he complained of pain in his side, pain in the right shoulder, sometimes in the clavicle, sometimes in the scapula; he felt a sense of weight, and "dragging," as he expressed it, whenever he lay on his left side. Upon examination I found the liver *very much enlarged*, occupying a large part of the abdomen, and painful when pressed. The man was much debilitated, had night sweats, very feeble and quick pulse, flushed cheeks, or rather a circumscribed spot on each cheek, such as usually is seen in hectic fever; he complained of pains in his limbs, had a scorbutic eruption on his lower extremities, with purple spots on some parts of his body. I thought the case desperate, but determined to do all in my power to give him relief; and, upon considering his case maturely, thought nothing promised so fair to do this as the nitric acid. I accordingly prescribed a drachm of it to be diluted in a quart of water, and taken in the course of the day; the second day he took a drachm and a half in three pints of water; the third day, two drachms, as he had borne the first increase of the medicine very well. It was very grateful to his taste, and allayed his thirst. I continued the dose at two drachms for four days, when it was increased to two and

an half, diluted with three quarts of water, and taken for his constant drink through the day and night. In this manner the dose was increased to half an ounce in the course of three weeks, beyond which I did not increase it. His strength increased, his appetite returned, his scorbutic habit was almost gone, the medicine began to affect the gums, and at the end of the fourth week the pain in the shoulder had greatly diminished, and was not troublesome; the liver appeared to be decreased in size: he was in good spirits, spat freely, and said he could lie on his left side without experiencing so much uneasiness. From this time the diseased liver gradually diminished in size, his health and strength returned, and after continuing the medicine for nine weeks, he was discharged, perfectly cured.

I could add several other cases in which it was equally efficacious in curing the disease, but it is unnecessary; suffice it to say, that I have never failed with it, although I have no doubt that cases may occur in which it will not succeed, particularly where *very extensive suppuration* has already taken place, or where suppuration, combined with *scurvy*, in a very considerable degree exists; but in these cases no medicines will effect a cure at sea; and even if the patient is on shore, and has fresh animal and vegetable food, his chance of recovery is *very small*.

With respect to the *modus operandi* of nitric acid, I must say I am doubtful. It is a tonic, every person must admit; that it is a stimulant, none can deny. It salivates; so in some instances does copper, and oxygenated muriatic acid; so does the best acetic acid; so will opium, cicuta, hyosciamus niger, &c. when given to a certain extent. In this they all *appear to approach somewhat* towards the nature of mercury; yet every one admits them to be very different. Acids contain oxygene, mercury is only active in proportion to the quantity thereof that exists in its different preparations. But do opium and hemlock also contain oxygene? If not, does salivation depend upon oxygene in certain cases, and not in others? It certainly must depend upon *something* in common to all articles that salivate.

We know that seneka polygala, and several other powerful stimuli, will produce ptyalism. No person will contend, that seneka contains oxygene—but if we view the action of all these medicines, we will find they have one thing in common, *i. e.* they are all powerful incitants: but it may be asked, if ptyalism depends upon an incitant action, why do not all articles of that class salivate? Perhaps it may be owing to a *peculiar* stimulating power possessed by these articles, and not by the others. What is this peculiar power? I do not know: that it is *not* oxygene, I believe; but what it is I cannot pretend to say. There are many things which we know, but cannot explain. What is matter?—What is excitability?—What is life? We know all these to be; but where is the philosopher that can say in what they consist? So in like manner with the salivating principle: we know it is something: we know it must be possessed in common by several articles *apparently very different*; but what it is, as I have said in the beginning of this discussion, *I am uncertain*. I hope, Sir, some of your learned correspondents will solve my doubts. With this view I submit them to the public. Grateful for the information I have received from your valuable work, I remain,

With sentiments of the most profound respect and esteem,
Yours, &c.

S. FFIRTH.

DR. JOHN REDMAN COXE.

History of the Case of a very extensive Burn—successfully treated according to Mr. Kentish's method. By the EDITOR.

THE following case is so strongly in favour of Mr. Kentish's plan for the treatment of burns, that I feel assured its diffusion will be productive of advantage.

Anne M^cQuicker, five years of age, living with Mr. Robert Smith, No. 28, south Second-street.—On the 11th January of the present year, her clothes, which were of thin calico, (a miserable dress for the inclement season), took fire whilst she

was sitting by the stove, and were nearly burnt off her back. The child ran in great agony into the street, in the midst of the snow; and by the endeavours of some to put out the flames, the clothes were stript off her, carrying with the cinders, the cuticle and skin in some places, to an extent of surface, whose circumference, *five feet* in length of string, would barely surround. She was taken into a neighbour's house, almost in a state of nakedness, and a most miserable spectacle, arising from the mixture of blood and half-burnt tinder, &c. adhering to this extensively injured surface.

A medical gentleman, then in the neighbourhood, recommended the application of cold milk to the burn, and laudanum to be used internally. As no advantage was derived from this, and as the child suffered the most violent pain, I was requested to see her, as I happened to be at one of the neighbours. Uncertain of meeting with the gentleman who had previously prescribed for the child, and anxious, if possible, to afford her some relief, I concluded to go, and found her, even worse than had been represented. She was suffering under one of the most violent chilly fits I ever witnessed, which seemed as if it would carry her off; and the pain of the burn appeared to be absorbed in the superior suffering from the chill; for she exclaimed continually (whilst her teeth were violently chattering in her head), "cover me! cover me!"—The burn extended from the right axilla, to below the great trochanter of the same side—over the right clavicle and breast, and beyond the sternum in some parts, over the abdomen beyond the linea alba and the upper parts of the pudenda—backwards it extended to the spine, nearly in a straight line down—and the greater portion of the inferior part of the arm was either raw or in blisters. The fire had extended its influence considerably beyond the boundary of the sore, as was evident from the erysipelatous blush, and from several small blisters scattered here and there.

It appeared scarcely possible that so young a child should survive so extensive a wound; and even if the first violence of the injury was overcome, it remained doubtful if the copious

suppuration would not be greater than she could support. Nevertheless, I felt persuaded that nothing could save her but the plan proposed by Mr. Kentish; and I ordered immediately the spirits of turpentine on rags to the whole surface of the sore. From the hurry, I neglected to have it warmed, which would probably have aided in sooner removing the chill. In the mean time she took thirty drops of laudanum, and the rags were kept constantly wet till the liniment was prepared, as a permanent application. The laudanum was repeated, as the chill did not entirely subside, and the pain continued violent several hours. She was directed the use of wine and water to drink; and the liniment was applied anew at bedtime, with some more laudanum; which relieved her, but did not prevent a restless night.

The following day (the 12th) the pain, though great, was much alleviated, and the liniment was continued with occasional doses of laudanum. She complained of great difficulty of swallowing, which was ascribed to the flame having been drawn into the fauces. 13th. Symptoms the same; slight appearance of suppuration; the blackness of the sore is now chiefly removed, by the tinder, &c. adhering to the ointment, and coming away with the dressing. On the 14th, suppuration commenced, and became daily more copious; she was now ordered laxative medicines, and put on a strict diet. One part was conspicuous, of about five or six inches diameter, on the lower part of the abdomen, bounded by the pubes, the linea alba, the ilium, and a line from thence to the navel, which seems to be so much destroyed that a deep slough may probably come away. As suppuration was now well advanced, I applied, about the 16th, Turner's cerate, chiefly as an estimate of the value of either application in such an extensive burn. The result was, the child was worse all day and night, with additional fever and pain, and considerable alteration in the healthy aspect of the sore. The liniment consequently was re-applied, with great relief: her bowels were moved with fenna and manna, and by the next day things were as favourable as before.

20th. Pain still very considerable, from the great extent of

the fore, which precludes the smallest motion without rubbing some part of it. She is obliged to be lifted bodily out of bed, in order to be dressed, which causes much pain, as she is forced to stand the whole time. The suppuration became now very copious; I therefore again tried Turner's cerate, and chalk finely levigated; but the alteration for the worse in twenty-four hours was so great, that I was in no hurry to renew the trial. The turpentine liniment again restored its healthy state.

During all this time she was very strictly dieted, and so highly excitable was her system, that from foolishly giving her a small piece of a chicken, for dinner, which she thought she could eat; a violent degree of fever took place, which kept her restless and uneasy all night, with augmented pain of fore: and when dressed in the morning, in place of fine healthy granulations and suppuration, an ugly ill-conditioned ulcer, with sanious discharges, presented itself to view. Purging and close attention to diet, once more, in a short time, overcame this, and the edges were rapidly cicatrizing.

It was now thought advisable to get her into the hospital, as from the extent of the fore, it was presumed it would take a great while to heal; and she was admitted January the 31st. In a short time it became necessary to prescribe the bark in decoction, with jellies, &c. *Serpentaria* also, and other remedies calculated for the debilitated state of her stomach, were employed, by which she recruited; the fore healed rapidly under the use of Turner's cerate so that by the middle of March it was not larger than the palms of both hands, and confined to that part which I have stated, as being most injured by the fire. A solution of white vitriol at this time hastened its cicatrization; and on the 11th of May she was discharged cured. Had she not accustomed herself to pick the fore, it probably would have been well two or three weeks sooner; as for four or five weeks previous to this, it had not been more than from two to three inches in diameter. On measuring the circumference of the cicatrix before she left the hospital, it required a string of *four feet six inches* to surround it. I have above observed, that five feet would not have surrounded the extent of the injury sustained, in the

first instance, especially if that of the arm is included, which in the present measurement is not adverted to.

The above instance, if I had had any doubts before of the efficacy of Mr. Kentish's plan of treating burns, would have completely silenced them; and it gives me pleasure to add, that the physician who first prescribed for the patient, and who had had frequent opportunity of seeing very extensive injuries from burns and scalds, on the large plantations of some of the West-India islands, was beyond measure gratified at the powerful and rapid effects of the plan pursued above, which he said he should have been fearful of using, had he not been convinced of its mildness and utility by so striking an example. *

Philadelphia, July 1st, 1805.

Case of Mortification and Separation of the Body of the Uterus; also an Account of a monstrous Birth. By DR. J. ELMER.

A MIDDLE aged woman, the mother of several children, of a slender delicate habit of body, having been exposed to many hardships by reason of her indigent circumstances, was, after hard exercise, taken with a partial *proci-dentia uteri*. For want of proper assistance, an inflammation and sphacelation of the *fundus uteri* succeeded, and after some days, about the size of a Spanish dollar, of that part of the uterus which was prolapsed without the vagina, separated; upon which the inflammation subsided, and the woman soon became well without any help.

About two years afterwards, being obliged to travel several hundred miles in a horse-cart, the fatigue of so long a journey, with the violent jolting of the cart, brought on a complete *proci-dentia uteri*; the whole uterus falling without the vagina,

* I cannot, from a review of the above, and other cases of burns which have come under my notice, but protest against the plan proposed by Mr. Earle of applying ice to burns, even of the most extensive nature. I have never seen his work on the subject, and can judge of it only by partial extracts.

which was followed with a violent inflammation and swelling of the same, upon which I was sent for. When I visited the patient I found her labouring under a burning fever, sickness at stomach, weakness and great pain in the small of the back, and the prolapsed uterus swelled to the size of a large child's head, as black as a hat, of a cadaverous smell, and with every other mark of an incipient mortification; the poor woman being extremely dejected and despairing of any relief. As her pulse was very small and feeble, and the sphacelation so far advanced, I judged it not advisable to bleed, but ordered the parts to be continually fomented with a strong decoction of bitter herbs, and gave her frequent large doses of a nitrous julep, with a little lavender comp. in it. As she lived at a great distance from me, nothing more was done for her. About three days after I saw her, a separation of the whole body of the uterus, which was now growing putrid, began to take place, and in two or three days more, entirely sloughed off from the sound vagina; upon which the pain and fever abated; the patient recovered her health and strength; and the last time I heard from her, which was several months after this affair happened, she was in perfect health.

The following account of an imperfect fœtus may perhaps be thought worthy of notice:—

A married woman in the seventh month of pregnancy was seized with labour pains that brought on an abortion. She was first delivered of a perfect child, which lived several hours. This being come away, the midwife perceived another behind, of which with much difficulty she was also delivered; but instead of a perfect well-formed fœtus, it had the following appearance: the body was completely formed, and about the size of the other child's, but it was wholly destitute of a head, and had but one arm. The body appeared as if the head had been cut square off close to the shoulders, and in the place where the neck should be, there was a small spot about the bigness of an English crown, raw and bloody, having a fibrous appearance as though it had adhered to something. The side on which the arm was wanting was perfectly

smooth without any vestige of an arm. The other arm was well formed as far as the hand, but it had no fingers, only two little fleshy excrescences, about half an inch long, growing in the place of fingers. Its legs were well shaped, but its heels grew where the instep ought to be, and it was destitute of toes, having only two fleshy excrescences on each foot, (similar to those on the hand) in place of toes. It had no umbilical cord nor placenta annexed to it. In the place where the umbilicus ought to be, or rather a little higher, there was a small fleshy production about two inches long, which being cut off appeared white and bloodless, having no marks of blood vessels in it. The flesh of its body appeared bloated, and felt harder than usual, and its joints were so stiff as to be bent with difficulty.

I had no opportunity of examining it thoroughly, but am of opinion it adhered to some part of the placenta of the other foetus, in the place where it appeared raw and lacerated, and that it received its nourishment *in utero*, by the small blood vessels in that part inosculating with those of the placenta.

Such imperfect productions as this should teach us not to draw too hasty conclusions from preternatural appearances. The dispute whether the foetus *in utero* receives its nourishment by the mouth or umbilical vessels, or both, has long subsisted, and many arguments have been deduced on both sides the question from the mal-formation of the chylopoietic organs of foetuses. In the present instance it is very evident that it received its nourishment neither by the mouth nor umbilicus, for both of them were wanting. It must therefore have received it either in the manner some of the ancients suppose the foetus to be nourished, viz. by absorbing the nutritious particles through the pores of the body in the same manner as a sponge imbibes water, or else as above conjectured. The latter will perhaps appear the most probable.

J. ELMER.

13th September, 1773.

MEDICAL AND PHILOSOPHICAL REGISTER.

FOREIGN AND DOMESTIC.

Medical Graduation in the University of Pennsylvania.

AT a public commencement, held on the 5th of June, 1805, in the University of Pennsylvania, the following gentlemen were admitted to the degree of doctor of medicine, having respectively presented, and defended their inaugural dissertations, annexed to their names.

Joseph Klapp, of Albany, New-York. On the non-existence of an æriform function in the skin; and the impropriety of ascribing absorption to the external surface of the human body.

Benjamin Champneys, of New-Jersey. On dysentery.

Joseph Parrish, of Philadelphia. On the influence of the passions upon the body, in the production and cure of diseases.

Isaac Cleaver, of Philadelphia. On cataract.

William Gibbons, of Pennsylvania. On hypochondriasis.

Wakeman Bryarly, of Maryland. On the lupulus communis, of Gærtner; or the common hop.

Richard L. Savin, of Maryland. On the effects of cold in the cure of fevers.

George E. Mitchell, of Maryland. On the puerperal state of fever.

Elisha De Butts, of Maryland. On the eye and vision.

John T. Ross, of Maryland. On the medical theories of Brown, Cullen, Darwin, and Rush.

Joseph Hartshorne, of Alexandria, district of Columbia. On the effects produced by air upon living animals.

Thomas Ewell, of Virginia. On the stomach and secretion.

John Douglass, of Virginia. On mercury.

Henry P. Dangerfield, of Virginia. On cutaneous absorption.

Henry M. Gray, of Virginia. On cynanche trachealis.

John Esten Cooke, of Virginia. On the inflammatory bilious fever of 1804, in the county of Loudoun, Virginia.

James C. Madison, of Virginia. On the medical properties of iron.

William Howard, of Virginia. On the hydropic state of fever.

Lewis Burwell, of Virginia. On digitalis purpurea.

George Evans, of South-Carolina. On the rheumatic state of fever.

Daniel Legarre, of South-Carolina. On the effects of tobacco fumes on the system, and their use in cases of suspended animation from submersion.

George Cooke, of Georgia. On jaundice.

Felix Robertson, of Tennessee. On chorea Sancti Viti.

Thomas Smith, of St. Croix. On wounds of the intestines.

By some unaccountable mistake, we find in many of the theses, the day of commencement dated on the 3d of June.

Professorship of Surgery.

A new professorship (of surgery) has been lately established in the university, to which Dr. Physick has been appointed by the trustees.

Election of Officers in the College of Physicians.

At the annual meeting of the college of physicians, for the election of officers, held on the 2d of July, 1805, the following gentlemen were chosen officers for the ensuing year.

President———Dr. William Shippen.*

Vice-President——Dr. Adam Kuhn.

Censors———Dr. Samuel Duffield,
Dr. Thomas Parke,
Dr. Caspar Wistar,
Dr. Samuel P. Griffiths.

Treasurer———Dr. Benjamin Say.

Secretary———Dr. Thomas T. Hewson.

The Pennsylvania Academy of the Fine Arts.

It affords us great pleasure in being able to state, that a plan long since contemplated, has at length been carried into execution under very favourable auspices, viz. the establishment of an academy of the fine arts in the city of Philadelphia. A liberal subscription has been realized, and directors have been chosen to carry the design into effect, who have forwarded an extensive list for casts from the most celebrated statuary, to Paris, whilst they are now intent on procuring the erection of a handsome building for their reception, which will do honour to our city, and doubtless aid the general designs of the institution.

* Dr. John Redman, the venerable president of the college from its first institution, having resigned his situation previous to the election.

At a meeting of the members of the association for promoting the fine arts, held in Philadelphia the 21st of June, 1805, the following gentlemen were chosen officers of the institution.

President.

George Clymer.

Directors.

William Tilghman,	Joseph Hopkinson,
William Rawle,	Thomas C. James,
John R. Coxe,	C. W. Peale,
Joseph B. McKean,	Moses Levy,
John Dorsey,	William Meredith,
William Poyntell,	William Rush.

And at a meeting of the directors, Dr. Glentworth was chosen treasurer, and William S. Biddle, secretary.

At the first meeting of the directors, our much esteemed and celebrated countryman, Benjamin West, Esq. was unanimously elected an honorary member of the institution.

Hospital established at Natchez.

THE mayor, aldermen, assistants, medical faculty, and other citizens of Natchez humbly solicit the attention of the legislature of this territory to the following memorial:—

For the promptitude and zeal which your honourable body has already manifested to effect the establishment of a hospital in our city, we beg leave to return you the most sincere thanks. At the same time that it proves the interest you take in relieving the distresses of humanity, it precludes, to your memorialists, the necessity of expatiating on the extreme wretchedness and suffering that afflicted paupers in this place have experienced for want of such institution. Your memorialists, however, deem it their duty to submit the following observations, as tending to save the time and lessen the labour that would employ your honourable body in legislating on and investigating this subject.

By referring to the resolutions of the faculty which accompany this memorial, it will appear that it was hoped your honourable body would be pleased to solicit the assistance of the states and territories bordering on the Mississippi and Ohio, as well as of congress. The justice and propriety of such a demand, we humbly conceive, cannot be called in question by any one who has ever visited the city of Natchez, where a great number of poor transitory inhabitants of those states are at all times to be found; particularly during the most sickly season.

It will seem, no doubt, somewhat strange, to those who have not reflected particularly on the subject, that it should be necessary to seek assistance from abroad for the mere purpose of erecting and supporting a hospital; but it will appear evident when we consider the great cost of building, of provisions, and of every necessary article of expense; and particularly the high rate of service in this country. To these considerations we may add, the exhausted state of our public treasury, the smallness of our revenue, and the very great number of objects that require this sort of charity. And here we beg leave to state it as our humble opinion, that a competent hospital establishment in this place must be nearly as extensive as for the city of New-Orleans itself: for, although the number of resident citizens bears no comparison—although the concourse of strangers is not so great, nor the situation and climate so unhealthful; yet the number of sick poor, destitute of every means of support, is probably not much less. The causes of this, though not so obvious, are not less evident than the fact. It is well known to your honourable body, that boatmen from above constitute, in both places, the main body of the charitable objects that ought to be relieved by hospital institutions. The very small pittance they receive at New-Orleans for their service in descending the river, is generally exhausted before they reach Natchez on their return home. Add to this, their longer delay in this place, their having been longer exposed to the influence of a warm climate, and the fatigue of a journey on foot. The number of those who die here during the sickly season, for the mere want of comfortable lodging

and common attention, is indeed so great, that every one who has resided a summer in Natchez, has had reason to shrink with horror at the spectacle. The common council attempted, the last year, to avert this evil as far as lay in their power, by appointing overseers of the poor, invested with authority to provide for the sick at the expense of the city treasury: but notwithstanding the exertions of the overseers were incessant, and the whole amount of revenue overrun by upwards of five hundred dollars, they had the mortification to find that, for want of a hospital institution, the sum of human misery was not much diminished.

Your honourable body will have a right to expect from us, who have long contemplated this subject, and especially from those among us who have some acquaintance with hospital institutions, an estimate, however vague, of the probable expense it will incur. The idea will naturally present itself, that, as the trade from above is rapidly increasing, as also the growth of the city of Natchez and the population of our territory, what would now be a competent establishment, must, in the course of a few years, be very inadequate; and consequently, that an endless repetition of demands will be made. But we entertain a sanguine hope, that any future increase of expense will be amply supported by means of the donations and legacies that such charitable and laudable institutions never fail to receive.

In endeavouring to form an estimate of the probable expense, we shall confine ourselves to a statement of what we suppose will be the least and most frugal competent establishment.

Dollars.

We conceive a sufficient building cannot cost less than	10,000
The bedding, kitchen utensils, and household furniture,	1,500
The first supply of medicine and surgical apparatus,	500
Total amount of immediate expense,	12,000

Wages of an overseer,	-	-	750
—— of a matron,	-	-	180
—— of two servants,	-	-	150
Marketing—say two dollars per day,	-	-	730
Groceries of all kinds,	-	-	750
Medicine,	-	-	200
Wood and water,	-	-	250
Burial, waste, repairs, and all other contingencies,			800
			<hr/> 3,810
Deduct for board of a certain description of patients,			810
			<hr/>

Total amount of annual expense, - 3,000

The disposition your honourable body has already discovered to support and countenance the institution, forbids us to petition you in a particular manner to make some appropriation for its promotion.

The subscription papers herewith accompanied, you will perceive, were originally intended to be submitted to the care and patronage of your honourable body. The subscriptions have been obtained in haste, and with little exertion: and we do not hesitate to give it as our opinion, that a much larger amount may be yet obtained in this way in this territory and from abroad. Wherefore we beg leave to suggest the propriety of immediately appointing trustees, and investing them with such powers as your honourable body may conceive most conducive to the interests of the institution.

An ACT to establish a Hospital in the City of Natchez, and for incorporating Trustees of the same.

Whereas great numbers of sick and distressed boatmen employed in the navigation of the river Mississippi, and other indigent persons destitute of the means of procuring medical assistance are found in the city of Natchez and other parts of this territory, for the relief of whose wants private charity and present legal regulations are inadequate; and subscriptions to a considerable amount having been raised, and the sum of one thousand dollars bequeathed by the late George Cochran, Esq.

for the purpose of establishing a hospital in said city: and whereas David Lattimore, Garret E. Pendergraft, William Lyon, Joseph Macrery, James Speed, Andrew Macrery and Frederick Seip, physicians of that place, have humanely proffered their professional services gratis, for the benefit of such an institution:

Sec. 1. Be it therefore enacted by the Legislative Council and House of Representatives of the Mississippi Territory, in General Assembly convened, That there be erected and established in the city of Natchez, a hospital for the reception and relief of indigent boatmen and other paupers of every description in this territory, who may be in want of medical aid and assistance, and who, if without the limits of the city, may be sent thither by order of any justice, at the expense of his proper county; to be called and known by the name of "Natchez Hospital," to be under the care, government and regulation of a body politic and corporate, as herein after provided.

Sec. 2. And be it further enacted, That John Steel, Adam Bingaman, William Brooks, William G. Forman, Abijah Hunt, John Girault, Ferdinand L. Claiborne, Samuel Postlethwait, jun. John Henderson, and Job Ruth, together with the mayor of the city of Natchez for the time being, be, and they are hereby created a body politic and corporate, by the name of "The President and Trustees of the Natchez Hospital;" and that they and their successors duly elected members of the said corporation, shall be and remain a body politic and corporate by that name forever; and they and their successors shall be persons in law capable of suing and being sued, pleading and being impleaded, in all courts and places whatsoever, and may have a common seal, and alter and change the same at pleasure; and they and their successors shall by the same name in law be capable of receiving, purchasing, holding and conveying any estate real or personal for the institution and use of said hospital; and all subscriptions, donations, grants, gifts, bequests and devises, made or that may be made, for the institution or use of said hospital, shall appertain to, and vest in said corporation by the aforesaid name, for the use and benefit of

said hospital, and for effecting the purposes and intentions of the donors and grantors.

Sec. 3. *And be it further enacted*, That the number of said trustees, including the president, shall not exceed eleven, six of whom shall be a quorum to do any business in their corporate capacity; and the mayor of the city of Natchez shall *ex officio* be president, but in his absence a president *pro tempore* may be elected; and said president and trustees shall have power, from time to time, to fill up all vacancies that may happen in said corporation, by the election of suitable persons as successors, and they shall have power and authority to determine the time and place of their meetings, and the manner of notifying the same.

Sec. 4. *And be it further enacted*, That said president and trustees shall elect from their own body, a treasurer, who shall give bond and security to said corporation, in the sum of ten thousand dollars, conditioned for the faithful performance of the duties of his office, and for rendering a just and true account of all monies, securities and property of every kind coming into his possession as treasurer, when and as often as thereto required; and all deeds signed and delivered by said treasurer, by order of said president and trustees, sealed with their seal, shall, when made in their corporate name, be considered in law as the deed of said corporation; and all monies, securities and other property of said president and trustees, coming into the hands of said treasurer, together with all books in which his accounts, as treasurer, are entered and kept, and all papers and vouchers thereto appertaining, that may be in his hands at the expiration of his office, shall, on demand of him, his executors or administrators, be paid and delivered over to his successors; and all monies recovered on the treasurer's bond, shall be paid to the president and trustees, for the uses, and subject to the appropriations aforesaid.

Sec. 5. *And be it further enacted*, That said president and trustees, shall have power and authority, from time to time, and at all times hereafter, to employ physicians and surgeons to attend said hospital, with such powers and under such regulations as said president and trustees shall deem expedient:

Provided, That such physicians and surgeons shall be of the city of Natchez, so long as the medical faculty in that place will attend the institution gratis. And said president and trustees shall have power and authority to elect and appoint managers, overseers, or stewards of said hospital, and all necessary officers and servants, to declare the tenures, salaries, emoluments and duties of officers, to determine the mode of ascertaining what description of persons or patients are entitled admission into said hospital, and to benefits of the institution gratis, and what description of persons or patients shall be admitted on terms of compensation and the quantum thereof, to make and ordain all reasonable rules, ordinances and bye-laws (not repugnant to the ordinances and laws of this territory) with reasonable penalties for the good government of said institution.

Sec. 6. *And be it further enacted*, That said president and trustees be, and they are hereby empowered, to erect and keep in repair, one or more house or houses for a hospital, and such other buildings as they may deem necessary for said institution.

Sec. 7. *And be it further enacted*, That the legislature of this territory may grant any further powers to, or alter, limit, annul or restrain any of the powers by this act vested in said corporation, as shall be judged necessary to promote the benevolent objects and best interest of said institution.

Sec. 8. *And be it further enacted*, That there be and hereby is granted to the president and trustees of the Natchez hospital, for the use and benefit, and for the purpose of supporting the same, the annual sum of one thousand dollars, to be paid out of the treasury of this territory, for the space of five years from the first day of May next ensuing.

PHILANDER SMITH, *Speaker of the House of Representatives.*

JOHN ELLIS, *President of the Legislative Council.*

APPROVED, January the 18th, 1805.

CATO WEST, *Secretary of the Mississippi Territory, acting as Governor of the same.*

A Statistical Table for the United States of America, published annually to promote Statistical Inquiry. By S. BLODGET, jun.

YEARS.	POPULATION.					Improved lands, part of 640 millions of acres.		In their natural state.		Militia.	Navy United States.	Seamen.	Emigrants, besides 4500 Slaves imported in 1804.	Merchandise, including emigrants' stock, furniture, &c.	EXPORTS.		Tons, merchant vessels on which duties were collected.	Averaged labour per day.
	Free persons.	Slaves increase near 2 1-2 per cent. per annum.	Total population, including Louisiana, in the year 1804.	Total increase in each year.	Persons to each sq. mile.	Improved lands, part of 640 millions of acres.	Cultivated per acre.	d. cts. & cts.	In their natural state.						Dollars.	Dollars.		
1774	1 986 000	500 000	2 486 000	—	2	20 860 000	2 50	35	421 300	—	—	15 000	3 000	7 000 000	6 100 000	6 100 000	198 000	30
1784	2 650 000	600 000	3 250 000	—	3	21 500 000	2 25	40	541 666	—	—	18 000	3 000	11 000 000	9 000 000	10 150 000	250 000	50
1790	3 232 383	697 697	3 930 000	—	3	30 000 000	2 10	35	654 000	—	—	25 000	3 500	17 500 000	14 200 000	16 000 000	486 800	50
1791	3 333 761	714 139	4 047 900	117 900	4	31 000 000	3 20	55	677 650	—	—	28 000	4 000	19 000 000	14 600 000	18 399 102	502 698	60
1792	3 438 237	731 000	4 169 237	121 337	4	32 000 000	3 50	65	694 889	—	—	30 000	5 000	22 000 000	15 060 000	21 005 568	567 698	65
1793	3 446 417	748 000	4 294 417	125 180	4	33 500 000	4 —	95	715 756	—	—	33 000	6 000	26 000 000	15 420 000	26 011 788	627 670	70
1794	3 657 189	766 000	4 423 189	128 632	4	34 000 000	4 50	120	737 208	—	—	39 900	3 500	34 000 000	16 200 000	33 043 725	628 617	100
1795	3 771 946	784 000	4 555 946	132 697	4	34 550 000	4 60	125	759 334	—	—	45 000	3 900	48 000 000	18 064 050	46 855 556	747 964	100
1796	3 890 124	802 500	4 692 624	136 678	4	35 100 000	4 75	140	782 104	—	—	51 500	4 500	68 000 000	20 024 021	67 064 097	831 900	100
1797	4 012 902	820 500	4 833 402	140 776	4	35 600 000	5 —	150	805 567	3	124 60	60 200	3 500	52 000 000	24 052 671	51 294 710	876 912	90
1798	4 940 404	838 000	4 978 404	145 002	4	36 100 000	5 25	160	829 734	13	350 62	300	3 800	63 000 000	27 991 433	61 327 411	893 329	85
1799	4 273 756	854 000	5 127 756	149 352	5	36 300 000	5 50	170	854 626	42	950 63	500	4 000	79 500 000	33 142 187	78 665 522	920 000	100
1800	4 404 988	876 790	5 281 778	158 825	5	36 800 000	5 50	190	878 000	42	970 64	000	3 800	71 800 000	31 840 903	70 971 580	972 492	90
1801	4 544 000	898 300	5 442 300	158 512	5	37 400 000	5 60	2 —	914 001	20	600 65	000	4 000	88 900 000	46 377 792	93 020 315	947 576	80
1802	4 682 313	921 000	5 603 313	161 215	5	38 000 000	5 70	2 5	940 000	20	600 65	000	4 500	73 000 000	36 182 173	71 957 144	1 003 002	75
1803	4 727 412	944 000	5 771 412	168 099	5	38 500 000	5 85	2 10	972 000	18	556 63	000	3 900	56 000 000	42 205 961	55 800 033	1 107 323	75
1804	5 000 100	999 900	6 000 000	228 588	6	38 950 000	6 —	1 15	1 050 000	20	560 64	000	5 000	80 000 000	41 477 479	77 699 074	—	75

Plan of a Code of Health and Longevity.

The following is extracted from a "Prospectus of a new work, to be intitled The Code of Health and Longevity, by Sir John Sinclair, Bart." A gentleman well-known for his statistical inquiries, and various philosophical pursuits.

SKETCH OF THE PLAN.

THE medical authors who have hitherto written on health, have commonly restricted their observations to six general heads: 1. Air; 2. Diet; 3. Motion and Rest; 4. Sleeping and Watching; 5. Retention and Excretion; and 6. The Passions of the Mind. To these they have given the singular name of the six NON-NATURALS, from the idea, that though, if they were managed with prudence, they might be entitled to the name of Naturals, yet as they are much oftener abused, and thence are the source of various disorders, they are more frequently acting against, than with nature, and therefore may be properly termed *Non-Naturals*.* Some authors on health have also gone into the discussion of what they call *Non-Necessaries*†, in which they include clothing and the professions of life. But as such a mode of explaining the doctrines of health and longevity, is in many respects defective and exceptionable, it is not proposed to adhere to it upon the present occasion.

The most natural division of the subject under consideration, seems to be, to point out,

1. The circumstances which necessarily tend to promote health and longevity, independent of individual attention.

* Lynche's Guide to Health, p. 61. Mackenzie, in his History of Health, Introd. p. 4. gives a different account of the compound word *non-natural*, which, he says, originated from the jargon of the Peripatetic schools. It was first mentioned by Galen, who divides things relating to the human body into three classes: Things which are *natural* to it; things which are *non-natural*; and, things which are *extra-natural*. (Class 7. lib. de Ocul. Partic. tertia, c. 2. From this fantastical distinction, the epithet *non-natural*, he says, first arose.

† Strother's Essay on Sickness and Health, p. 445.

2. The rules, which, if observed by an individual, have a tendency to preserve health and existence, even where these independent circumstances are wanting. And,

3. The regulations by which the general health and safety of a great community are protected from the various injuries to which they are likely to be exposed.

PART I. Circumstances which necessarily tend to promote Health and Longevity.

It will hardly be disputed, that while individuals differ so much from each other with regard to a variety of important particulars, as the climate in which they reside, the manner in which they are formed, &c. that there must necessarily be a material difference with respect to the duration of their lives. It is essential therefore, in the first place, to ascertain, what these particulars are. It seems to me that they may be all comprehended under the following general heads :

1. Form and growth of the individual. 2. Natural constitution. 3. Disposition of mind. 4. Parentage. 5. Climate. 6. Education. 7. Rank in life. 8. Particular occupation. 9. Connubial connexion. And, 10. Sex.

Where a favourable condition of all, or the greater part of these circumstances occur, there, health and longevity may be expected.

In some particular cases also, it may be proper to remark, that nature seems to make a fresh effort, and in some measure to renew the distinctions of youth, and some of the circumstances which attend it.

PART II. Rules for preserving Health and promoting Longevity.

It is evident, that if men lived uniformly in a healthy climate, were possessed of strong and vigorous frames, were descended from healthy parents, were educated in a hardy and active manner, were possessed of excellent natural dispositions, were placed in respectable situations in life, were engaged only in healthy occupations, were happily connected in marriage, &c.

&c. there would be little occasion for medical rules. But it is universally known, that some individuals enjoy only a part of those advantages, whilst others possess hardly any of them complete. Hence arises the necessity of attending to those *rules* which observation and experience have pointed out as being the most likely to counteract the disadvantages arising from so material a want as of any of the natural advantages above enumerated. These rules relate to

1. Air. 2. Diet. 3. Digestion, and its effects. 4. Clothing. 5. Habitation. 6. Exercise of the mind. 7. Exercise of the body. 8. Sleep. 9. Amusements. 10. Habits. 11. Temper, or disposition. And, 12. Medicine.

To which will be added, several rules of a *miscellaneous nature*, concerning the means of alleviating the effects of the various accidents to which persons are exposed; together with observations on the necessity of adhering to different rules according to climate, peculiar occupations, &c.

PART III. *Regulations for the Health of the Community.*

It is in vain, however, that either nature has formed an individual for long life, or that he observes all those rules which are necessary for the preservation of health, unless attention be paid by the government of a country, to the happiness and safety of its subjects. This is a point which has seldom been attended to in the manner in which its importance deserves. While the attention of lawgivers is unceasingly directed to a variety of less important objects, those regulations on which the safety of the people at large depend are unfortunately neglected. Yet what can be more pernicious, than to suffer the climate of a country, for instance, to continue noxious to the health of its inhabitants, merely for want of drainage, cultivation and improvement, when thousands of instances might be adduced of the advantages which have resulted from the adoption of an opposite system? What can be more impolitic, than to permit unwholesome provisions and other articles, to be sold, without punishing those who thus attempt to injure the

health, perhaps to destroy the existence, of their fellow-creatures? What more dangerous, than to permit public amusements of a pernicious nature; to authorise improper customs; to neglect the education of youth, when the foundation ought to be laid of their future health and strength; to suffer public institutions to become the seminaries of disease; to disregard the safety of those who are trained for the public defence; to sanction the sale of noxious or doubtful medicines; and, above all, to permit the least risk of contagious disorders being admitted into a country, by which its whole population may be affected?

The police of public health, therefore, is a most important branch of the proposed inquiry; and the events which have recently happened in Spain and at Gibraltar, have given it additional interest. It may be treated of under the following general heads:

1. Police of climate. 2. Police of physical education. 3. Police of diet. 4. Police of public amusements. 5. Police of habits and customs. 6. Police of public institutions. 7. Police for the health of sailors and soldiers. And, 8. Police of medicine and the means of promoting its improvement.

CONCLUSION.

Such is the plan of the intended work, which others might doubtless have executed with more ability, but none with a more anxious wish, that it may prove *substantially serviceable* to the interests of human nature; or, at any rate, useful to those, who may apply their talents, to render the investigation therein carried on, still more complete.

Conversion of Animal Matter into Adipocire.

"AN extraordinary discovery was lately made in a cottage, on a rising ground belonging to Chapel Farm, in the parish of Cruwys Morchand, near Tiverton. The house and estate are the property of Mr. Brooks, a wealthy and respectable farmer, who resides there. It was formerly a monastery

belonging to the Augustine friars; and, at the dissolution of the religious houses, fell into the hands of the Cruwys's, from whom, by various alienations, it came to the present possessor. In order to convert a very fine spring into a pond, to water the meadows below, and also for the use of the cattle, Mr. Brooks dismantled the courtlage, the lincays, sheds, &c. and began to sink an extensive pond. When the workmen had sunk about ten feet from the surface, the strata appearing in a natural state, they came to a spongy matter; it appeared to be a very thick cuticle of a brown colour. They soon found bits of bones, and lumps of solid fat, of the same colour. Astonished at this discovery, one of them ran for his master, who, upon viewing the place, sent for Mr. Sharland, a person of great experience and practice as a farrier, in the neighbourhood. It was then resolved cautiously to work round the carcass; and at last the complete body of a hog was found, reduced to the colour and substance of an Egyptian mummy: the flesh was six inches thick, and the hair upon the skin very long and elastic. As the workmen went on further, a considerable number of hogs, of various sizes, were found in different positions; in some places two or three together; in other places singly, at a short distance. Upon the bodies being exposed in contact with the open air, they did not macerate nor reduce to powder, as is usually the case with the animal economy after lying two or three centuries divested of air; perhaps this may be occasioned by the mucilage of the bacon. This piggery continued to the depth of twelve feet, when the workmen stopped for the season, and the pond was filled with water. The oldest man in the parish had never heard that the ground had ever been broken; and, indeed, the several strata being entire, renders it impossible to conjecture from what causes this extraordinary phenomenon can be accounted for. The Cruwys have a complete journal of remarkable events which have happened in the parish for three centuries; and not the least mention is made of any disorder which could occasion such a number of swine to be buried in such a situation."

Annual Review.

Observations on Quackery.

“ HERE let me beg the reader to consider the power and province of mere rules in practical affairs of the easiest kind. No one has, I suppose, yet come forward with pretensions to teach the coarsest handicraft by a book. But in the tumult of literary projects, amid which we live, scarce any absurdity being impossible, let us imagine some adventurer, sufficiently intoxicated to undertake to communicate the capacity for exercising one of our humblest, and most useful trades, without apprenticeship, by a tract on *domestic shoe-making*. Should any one, after studying this tract, conceit himself qualified to handle the awl and the paring knife, I leave it to be imagined by the reader, how unmercifully the leather would be pricked and slashed, and what would be the condition of the poor toes, condemned to be lodged in the receptacle, prepared by these learned hands. Does common sense spurn at the idea of efficacious instruction in such an art by such means? Are the qualities, then, of leather more complicated than those of the living body? Does the art of managing the former to most advantage require a long apprenticeship, and not that of managing the latter? Are the tools that lie within the compass of the shoemaker's bench, more easy to employ properly, than the articles of the *materia medica*? I see, indeed, one essential difference: the incompetent mechanic will soon be marked; no clumsy workmanship of his can pass: whereas, in medicine, bunglers may go on, I know not how long, without disgrace. This chance of escaping detection is, no doubt, an encouragement for *private practitioners*, such as nothing can countervail, if they be agitated by the same restless dæmon that possessed Lord Chesterfield's blood-letting peer. But I have no hope of effecting any thing, except with active, but misguided benevolence. Insanity must be differently dealt with, and wrong-headedness is scarce to be reclaimed by plain dictates of prudence. Otherwise, a consideration, yet untouched, would be decisive! For the defect of the artisan, who leaves his work imperfect, can be afterwards supplied. But an amending hand may be vainly

applied in case of omission during sickness, where it is often just as fatal to leave undone what is right, as to do what is wrong. What then shall we think of the defence, which conscious incapacity is so apt to set up by anticipation: very simple my advice is: you may be sure, if it does no good, *it can do no harm!* Oh, yes, but if it does no good, *it can* do harm—all possible harm, provided in killing there be harm. It can arrest the rescuing hand, till the silent, but progressive finger of fate move from, *time is, to, time is no more.* There are plenty of occasions on which water-gruel, upon this harmless principle, will do a man's business just as effectually as laurel-water. And what, I pray, does it signify to the killed, whether they come to their end by the sauce-pan or the still? To the killer, the difference, we know, is all in all. Yet he who simply thrusts his ignorance between the sick, and the means of recovery, will really have done more mischief, inasmuch as he will have more largely accumulated pain upon death. And surely, where law cannot interfere, the call is so much louder for public censure. It is by far too unequal a game to be allowed in society, where one party stakes empty professions of good-will against the other's existence."

Beddoes' Hygeia.

Patent for Bleeding with Leeches!!!

It appears by the papers of late, that a person of this city has procured a patent for the bleeding with leeches, than which a more knavish piece of monopoly was scarcely ever known. That the United States should, for the benefit of an individual, commit itself in a way which must evidently prove detrimental to hundreds, is certainly matter of deep regret, as it does not evince any solicitude for the mutual advantages of all its members. That a person should have the effrontery to endeavour to obtain a patent, for what has now for many years been publicly practised both in this city and in Europe, does not surprise; but the weakness or ignorance evinced in granting it, is truly wonderful. It would certainly have been wise in those who have the privilege of granting patents, to have first ascertained what they were about to do, as it is believed it would readily have appeared to them, that this was

above the powers which they possess. They might as well pretend to grant a patent for bleeding with a lancet, or by means of cupping-glasses; and it would be but proper for the whole body of medical men to evince their dislike of such unjust and illiberal conduct, by withholding from the person alluded to, all the support in their power. A court of justice so far from assigning any forfeit to him for an encroachment on his privileges, would rather fine him for encroaching on the privileges of the multitude.

It would be satisfactory to know what success has attended our adventurer in his *breeding of leeches*, to which we are informed his patent extends! If the United States possess the power of granting the privilege of *breeding by patent*, we may reasonably entertain hopes of supplying in a few years the unsettled parts of our country with a sufficiency of *live stock* of all descriptions, without further importation!!! *Editor.*

Corrosive Sublimate to preserve from putrefaction.

As it is of much consequence to have an easy and cheap method* of preserving anatomical and morbid preparations, it is presumed the following will be of service, in precluding the use of spirits, which, from the necessity of frequent renewal, owing to evaporation, &c. is rendered very expensive.

The following is taken from a "Memoir lately published by Cit. Chaussier, professor in the school of medicine at Paris, on the means of preserving the dead bodies of animals from putrefaction, and preserving their essential form, and even of giving them freshness and the appearance of life."

"After some primary considerations, which serve as a basis to his researches, Cit. Chaussier examines the different processes which have been successively employed, for the preservation of entire carcases, or of anatomical pieces; and after having remarked that some are illusory, and that the others do not protect animal substances from the voracity of insects; that all are attended with the inconvenience of altering the essential configuration, and of reducing the body to a shapeless

mals, he announces the solution of sur-oxygenated muriat of mercury, in distilled water, as the most likely method to accomplish the desirable object. The use of this saline solution on animal substances, must vary according to the size and the condition of the object which it is intended to preserve. If it be only a separate piece, like the most of anatomical preparations, it is sufficient to plunge it in a solution of sur-oxygenated muriat of mercury, and to add in the vase one or more knotted parcels of fine linen, which contain some grammes of this mercurial salt, a precaution essential to the ensuring its remaining always equally saturated. After ten, twenty, or thirty days of immersion, that is to say, when the part has been penetrated through its whole extent by the saline solution, when a new combination has been operated through all its points, we may draw it out of the liquor and place it in a narrow-necked jar or bottle filled with distilled water, lightly charged with sur-oxygenated muriat of mercury, or else it may be exposed in a well-aired place, sheltered from the sun and from dust; it will then get dry, by little and little, acquire a consistence and a hardness resembling wood; and in this state, says the professor, it can no longer be either altered by the air, or attacked by insects. This, indeed, has been sufficiently proved by his experiments; Cit. Chaussier having for many years abandoned pieces thus prepared, to insects and to the vicissitudes of the atmosphere.

“The preservation of the entire body requires particular care and attention, all the details of which it would be impossible to comprise in a simple notice. It is in some measure a new art, the process of which can only be well executed by an experienced anatomist. It may be remarked, however, that to succeed completely in this preparation, there should be, by preliminary incisions, performed according to art, certain foramina or apertures made, by which the saline solution may penetrate easily and readily through the texture of all the parts; and when it is intended to give freshness and the appearance of life to the cadaver, it will be requisite, previously, to fill the vessels and cellular tissues with a solution of co-

loured gelatine or jelly. There should be, likewise, placed in the ocular orbits, eyes of enamel, proportioned to the age and habitual condition of the subject. After these preparatory processes, the cadaver should be plunged in the saline solution of sur-oxygenated muriat of mercury, and be kept there longer or shorter, according to its bulk or magnitude; after which it should be taken out to let it dry slowly, and thus form a sort of mummy as durable as those of Egypt, and which has, moreover, the advantage of preserving the characters and essential traits of physiognomy.* *Med. & Phys. Jour.*

Smith's Experiments on Wounds of the Intestines.

HAVING at page 107 of the 1st vol. of the Medical Museum, given copious extracts from that part of Mr. Astley Cooper's celebrated work on hernia, which treats of wounds of the intestines; with a comparison of the difference in the facility with which longitudinal and transverse wounds unite; and which by the experiments there detailed, were eminently favourable to

* In the month of September last, I took from a body, a diseased portion, and exposed it in an open vessel with some spirits. In a few days it began to grow very offensive; I therefore threw away the spirits and supplied the place with a solution of corrosive sublimate, about $\mathfrak{z}\text{i}$. or $\mathfrak{z}\text{ss}$. to nearly $\mathfrak{h}\text{i}$. of water. In this, the preparation continued for seven or eight months exposed to the air, and was then perfectly free from any putrid taint. In the early part of this year I opened a body in which the intestines were in the highest state of inflammation, and in many places sphacelated, so as scarcely to bear the slightest touch without breaking. The smell was so penetrating and offensive, that it was above a week before it left my coat. I brought away some portions of the intestines, and put them into a weak solution of the corrosive sublimate in water, which effectually destroyed the smell in a few minutes, and has added greatly to the firmness of the preparation. To these facts I may add, that having some years ago injected and dissected, several snails which I preserved in diluted alcohol, I was obliged occasionally to pour it off, to separate it from the fatty matter which gradually deposited from the preparations, and gave it a turbid appearance. As an experiment, I put these snails into a weak solution of corrosive sublimate, which preserves them effectually, and has given them a firmness they before wanted, without any injury to the colours of the injection, and it has checked the further deposition of the above-mentioned fatty matter.

Editor.

the transverse,—it may not be improper to quote the following interesting experiments on this subject, from the Inaugural Essay of Dr. Thomas Smith, of St. Croix, one of the medical graduates in the University of Pennsylvania, for the present year,—which Essay, he informs us, owes its rise to Mr. Cooper's invaluable work. As these experiments are not altogether so unfavourable to the union of longitudinal wounds of the intestines as those of Mr. Cooper, we may consider the point as yet *sub judice*, and expect a succession of experiments may place the fact exactly as it ought to stand.

“ April 7.”

“ *Experiment I.*—Assisted by my friend Mr. Klapp, an incision was made into the abdomen of a dog; and one of the small intestines having been brought into view, a transverse section was made into it, and the wound secured by four stitches, one at the mesentery, and the other three at equal distances from each other: the threads were then cut off at the knots, and the external wound closed by the interrupted suture.* The animal did not appear to have suffered materially from the operation, for in twenty-four hours he took food, and after the first day exhibited no symptoms of indisposition. On the 30th, he was killed, the wound of the intestine was found completely healed; the place at which the intestine had been divided, appeared somewhat thickened, considerable adhesions were observed among the small intestines. Three of the ligatures had disappeared, the other was still remaining loosely attached to the internal coat, and probably would have been discharged in the same manner as the others, had the dog been permitted to live a few days longer.”

“ *Experiment II.*—On another dog, I repeated the same operation, with this difference, that the ligatures which had been cut off in the preceding experiment at the intestine, were now left out at the external wound, in case it should be necessary to withdraw them. In consequence of the restlessness of the animal during the operation, considerable violence was done to

* The interrupted suture was used in every instance for securing the external wound, unless particularly mentioned.

the parts, before they could be reduced. On the second day after the operation, the dog appeared so ill as to make his recovery doubtful: on the 4th day, it was thought proper to remove the ligatures; after this he appeared better and took nourishment. On the 19th, he was killed: upon laying open the abdomen, the effects of inflammation were still obvious. The omentum was found adhering to the parietes of the abdomen, and very much indurated. Preternatural adhesions had taken place among all the viscera, but more particularly in the small intestines, which were knotted and twisted together in an astonishing manner. The intestine at the place where the wound had been made was not quite united."

"April 9."

"*Experiment III.*—Several of my friends honoured me with their attendance, whilst the following experiments were performed; the abdomen of a dog having been opened, and the small intestines brought into view, a longitudinal incision of about an inch and a half was made parallel with the mesentery, which was secured by four stitches, and the intermediate spaces sewn with a fine thread to prevent the fæces from escaping into the cavity of the abdomen:* the threads were cut off at the intestine. The animal died in about thirty-six hours. On dissection the marks of inflammation were found much less than might have been expected.

"The wound in the intestine was completely torn open, excepting at one stitch."

"*Experiment IV.*—A full-grown dog was submitted to the same experiment as the former, with this difference, that the intermediate spaces between each stitch were left unsewn. Six hours after the operation, the animal vomited stercoraceous matter, appeared dull and drowsy. On the 10th, in consequence of food being offered, of which he took a small quantity, vomiting was again excited. On the 12th, he took food, and from that time appeared to be doing well. Seven days

* According to the proposal of Thompson of Edinburgh.

after he was killed; on opening the abdomen the omentum was found adhering to the site of the external wound, being considerably indurated. The mesenteric glands were enlarged. The wound in the intestine was not completely united; two of the ligatures had disappeared. The other two still remained; the wounded gut had adhered to the mesentery and adjoining portion of intestine."

"April 10."

"*Experiment V.*—On a full-grown tarrier, I repeated the former experiment, wishing to see, whether a longitudinal incision could not by great care and attention, be so managed, as to do away the opinion of its being universally fatal. To effect which, a very small opening was made through the parietes of the abdomen, and a portion of intestine being brought into view, it was divided longitudinally for about two inches, and afterwards secured by six stitches which were cut off at the knots. The parts having been returned, the lips of the external wound were brought together and secured by adhesive plaster.* The animal did not appear to have suffered in the least from the operation, for in less than twenty-four hours he took food, and has continued doing well ever since."

"April 16."

"*Experiment VI.*—Pleased with my success in the preceding experiment, I obtained another dog and opened his abdomen. In one of the small intestines, I made a longitudinal wound for about three inches, and treated it in every respect similar to that related above. This animal appeared to have suffered very little more than the other, considering the extent of the wound, for in about twenty-eight hours he eat, and continued doing so until the tenth day after the operation, when he refused nourishment. Two days after he died; on examination, it was found that the wound had healed completely, but directly above the wound a bone half an inch long, and

* For it was observed, that the ligature used for securing the external wound increased the inflammation very much.

nearly as broad, was discovered to have perforated the intestine.*

"*Experiment VII.*---Wishing to know how much of the intestine might be removed, without much endangering the life of the animal, I performed the following experiment: having obtained a full-grown dog, an incision was made into the cavity of the abdomen, and two inches of one of the small intestines were removed; the divided portions were then brought together, and the wound was treated as the transverse incisions had been. In dissecting off the divided portion of intestine, some of the branches of the mesenteric arteries were wounded, but did not bleed during the operation. On visiting him in the afternoon, I found there had been a considerable hemorrhage which still continued. I did not open the wound, but applied a piece of wetted linen to the parts, which had the desired effect. On the 18th, the belly being somewhat tense, two of the external ligatures were cut away, that the blood, should any have collected, might be discharged; but the wound did not open, and the dog soon resumed the appearance of perfect health, which continued without interruption until May 6, when he was killed. The divided portions of intestine were found united, and the ligatures had been all discharged.†

"*Experiment VIII.*---Having opened the abdomen of a pointer pup, three inches of intestine were excised; the arteries being secured, the intestine in other respects, was treated as the last had been. In twenty minutes after the operation, he vomited the food which he had taken in the morning, and appeared dull the remaining part of the day. Three days after the operation, he took food, and continued doing well. May 6th, he was killed, and the abdomen being opened, it was with difficulty I could ascertain where the division had been; the coats of the intestine appeared somewhat thickened; one of the ligatures remained attached internally.

* This must have been owing to a diminution of the intestinal canal which is always produced by longitudinal wounds of the intestines.

† The viscera in this experiment appeared much more natural than in any other, probably from the hemorrhage that took place, which shews the propriety of bleeding largely in such cases.

“ April 18.”

“ *Experiment IX.*—Having divided the intestine of a dog transversely, I attempted to treat it in the manner spoken of by Mr. Ramdohr, viz. by introducing the upper extremity of the divided intestine within the lower; after having procured a piece of candle, as directed by him, it was inserted into that portion of intestine, which was supposed to be the uppermost. I then endeavoured to introduce the superior within the inferior, but the extremities of each became so inverted, that it was found utterly impossible to succeed; it was therefore given up and treated in the way recommended by Mr. John Bell, using only one stitch, and fastening it to the parietes of the abdomen. The dog took food the day after. On the 20th, it was observed that the fæces were discharging at the external wound, when the animal appeared very weak, but still continued to take food. On the 21st, he was much worse, and the abdomen being tense, the ligatures at the external wound were removed to facilitate the discharge of the fæces, which gave a temporary relief. On the 22d he died. On examination there was found a considerable quantity of fæces and water in the abdominal cavity. One portion of the intestine had united to the external wound through which part of the fæces were discharged.”

“ April 28.”

“ *Experiment X, and XI.*—Wishing to give Mr. John Bell’s method of stitching an intestine a fair trial, I made the following experiments: having obtained two full-grown dogs, a transverse incision was made into the intestines of each of them, which was secured by one stitch and fastened to the wound. No. 10, died in about twenty-four hours. The marks of inflammation were very great, and the fæces had been discharged into the abdomen. No. 11, died on the 2d of May. The intestines appeared very much inflamed, fæces as in the other instances were found in the abdomen, also water which the animal had drank. The large intestines appeared gangrenous, and tore very easily.”

"*Experiment XII.*—A pointer put of about two months old was submitted to the following experiment: a triangular piece was cut out of one of the small intestines, and the wounded intestine sewn to the parietes of the abdomen. The animal very soon shewed symptoms of indisposition and died in thirty hours. On examination the peritonæum and all the viscera of the abdomen were found considerably inflamed, a quantity of water was also in the cavity.

"It appears then from the result of my experiments on dogs, that not only the intestine may be returned into the cavity of the abdomen, but that the ligatures may be cut off and returned with the intestine,* and that we need not be under any apprehension of their being discharged into the cavity, for by some process of the animal economy of which we are ignorant, the ligatures have in every instance either been discharged with the feces or been found loosely attached to the internal coat of the intestine. It has been said by Messrs. Cooper and Thompson, that there is a curious difference in the facility with which a longitudinal and transverse wound of the intestine unites. But in all the experiments which I have made, it was found that with care the longitudinal united as kindly as the transverse, only requiring a little more attention to the diet of the animal, which should be very sparing and liquid until the wound has had time to heal. It certainly requires more pains to close a longitudinal wound of the intestine completely, than one which is transverse. The longitudinal incision always occasions a diminution in the diameter of the intestinal canal, thereby producing dangerous obstructions. If it should be of any considerable extent, probably the surgeon would be justified in cutting out the wounded portion and treating it as a transverse division. This may be done without much endangering the life of the animal, as appears by two experiments where three inches of the intestines were removed."

* As was observed by Mr. Thompson of Edinburgh.

Marine Spencer.

Description of the *Marine Spencer*, for the preservation of lives in cases of shipwreck or other accidents at sea, invented by Mr. Knight Spencer, of Broad-street, Cheap-side, for which the Royal Humane Society awarded him their honorary silver medallion. "This Spencer consists of a girdle to fit the body, six inches broad, composed of about eight hundred old tavern corks strung upon a strong wire, well lashed together with lay-cord, covered with canvass, and painted in oil, so as to make it water proof; when it is wanted, it is to be slid from the feet close up under the arms, and to be fastened over each shoulder by means of tapes or cords. A person thus equipped may safely trust himself to the waves, for he will float head and shoulders above water in any storm, and by paddling with his hands may easily gain the shore." *Month. Mag.*

Bone Broth.

Citizen Cadet de Vaux, superintendant of the military hospital of Paris, &c. having long turned his thoughts to the enormous waste that is made of bones, and on the means of ameliorating the subsistence of the indigent classes, the sick, poor, &c. gives it as his opinion, that the only method to extract, with ease, the nutritive substance from bones, is to pulverise them. The author has made his experiments and observations the subject of a memoir which he has lately published. In this he acknowledges himself indebted to the dog for the idea of pulverization. He further observes, that one pound of bones will furnish as much broth as six pounds of meat, and that the broth of bones, considered as an article of diet, is preferable to the broth of meat," &c. &c. Citizen Regnault has caused a pestle and mortar to be founded at his foundery, for this particular purpose, and with a view to realize the object of these useful labours. *Ibid.*

Water-proof Cloth.

It is well known that for some years past several methods have been tried to render cloth impermeable to water, and the

inventors of this process have kept the discovery a mystery. There was, however, reason to suppose that some fat oil made the basis of these recipes. A bottle of this liquor, the efficacy of which was known, having fallen by chance into the hands of Mr. Vauquelin, he was desirous to discover the composition of it. The following is the manner in which this chemist thinks it is composed, bating the proportions. Soap and strong glue, or any other gelatin, are dissolved in water. With this solution is mixed a solution of alum, which, being decomposed, forms in it a flaky precipitate, composed of oil, alumine, and animal matter. Weak sulphuric acid is then added, to re-dissolve a part of the alumine, and to render the precipitate lighter, and to prevent it from falling to the bottom. But the alumine, when once combined with the oil and animal matter, does not re-dissolve entirely in the sulphuric acid; for this reason, the oil always remains very opaque, and neither rises nor is precipitated. It may readily be conceived, that two large a quantity of sulphuric acid must not be added. Mr. Vauquelin does not know whether this be exactly the process, but by following it, he has been able to obtain a similar liquid, which possesses the same properties. *Tillock.*

On the Precipitation of Metals.

It has long been known that the metals precipitate each other from acids in their metallic state. Iron, for instance, may be employed to throw down copper, and copper to precipitate silver. But it has not been suspected till lately, that the same precipitations may be obtained when the metals are dissolved in alkalies; provided always, that the metals are employed whose oxyds are soluble in alkalies. *Klaproth* has lately published a set of curious experiments on this subject. Lead was precipitated in the metallic state, by introducing a cylinder of zinc into a solution of oxyde of lead in pot-ash. The same result was obtained when zinc was put into solutions of oxyds of tin and tellurium in the same alkali, and into

the solutions of oxyds of copper or tungsten in ammonia. This last result points out an easy method of reducing the very refractory metallic oxyds to the metallic state.

Month. Mag.

Experiments on Nickel.

Mr. Richter is at present occupied in a series of experiments upon nickel. In its pure state this metal is very malleable, nearly as brilliant as silver, and more attractive by the load-stone than iron. It contains copper; but Mr. Richter has found a method of freeing it from this metal. The oxyds of the purified nickel are of a much more lively green colour than the ordinary oxyds, and their solution in ammonia is of a pale blue colour.

Month. Mag.

Mode of preparing Brunswick Green.

The beautiful pigment discovered by Kastelyn, called *Brunswick Green*, much used on the continent for oil-painting and printed paper, is thus prepared: Shavings of copper are put into a close vessel, and sprinkled with a solution of muriate of ammonia (crude sal ammoniac). The copper appears to be first dissolved by the acid, and then precipitated by the volatile alkali in this process. The precipitate is washed and dried upon cloth or in wooden boxes. Three parts of the muriate of ammonia are sufficient for two of copper.

Historical Mag.

Wilkinson's Patent for making White Lead.

Instead of corroding blue lead, by vinegar, in pots, with the heat of dung or bark, Mr. W. takes litharge and grinds it exceedingly fine in sea water, or in any other saline mixture; and then by repeated trituration, washing and bleaching, he obtains white lead of the best quality. The saline mixture is used to facilitate the process, and the ceruse may be procured by levigation, washings, and drying by the medium of the common air, more time being allowed for the operation.

Ibid.

Gum, for Calico-printing.

Mr. Stephen Wilkins, merchant, of Worcester, thus describes his invention of a gum for calico-printing.

To half a ton weight of scraps of pelts, or skins, or pieces of rabbit skins, or sheep's trotters, add three hundred and fifty gallons of water, and boil them together for seven or eight hours, or until it becomes a strong size. Then draw it off, and, when cold, weigh it. Warm it again, and to every hundred weight add four gallons of the strongest sweet wort that can be made from malt, or twenty pounds weight of sugar, and when incorporated, take it off and put it into a cask for use.

This substitute for gum may be used by calico-printers in mixing up nearly all kinds of colours. By using a sixth part of gum with it, it will improve the gum, and be a saving of two hundred per cent; but without gum, of four hundred per cent. It will also improve and preserve the paste so much used by printers. *Ibid.*

Paste to stop Holes in culinary Vessels.

To six parts of yellow potter's clay is to be added one part of steel filings, and a sufficient quantity of linseed oil. This being mixed into a paste of the consistence of glazier's putty, the holes are to be filled with it, and after exposure to heat it becomes quite hard. *Ibid.*

Prevention of the Weevil in Sea-bread.

The fatal effects of the weevil in sea-bread have long been severely felt by seamen employed on long voyages: rewards have been humanely offered by the legislature for a cure or preventative, but hitherto without success. The following fact, discovered by accident, is strongly recommended to the attention of those who may be concerned.

A bag belonging to a powder-mill fell into a cauldron of liquid nitre; it was immediately taken out, plunged into cold water, and hung up to dry: several days after this circum-

stance the bag was filled with sea-biscuit, and sent on board a West-Indiaman, where it was stored away amongst the captain's stock. The vessel was nine months out of England before she proceeded on her passage home, when she got becalmed, and remained so long in that situation, that her crew were forced to be put on half allowance, more particularly so, as their bread was much destroyed by the weavils, and was hourly consuming. The captain at this time wishing to make use of the bag above mentioned, which had not been opened since the ship left England, ordered it to be examined, when, greatly to his surprise, the whole contents were found to be perfectly sound, without any appearance of having been injured by any; a circumstance solely to be attributed to the quality of the bag. Tilloch.

Serum of Blood used for Painting.

In the *Journal de Physique*, of Ventose, an. 11, is an account of a new kind of painting with the serum or watery part of the blood, by T. Carbonel, M. D. of Barcelona. See also Tilloch, v. 15.

It is asserted that it is as easily applied as prepared; and that it unites in it all the advantages of painting in oil, without any of its inconveniences. Its application as a cement for stones of all dimensions, especially those which are put into wood caissons for building under water, together with several other valuable properties, are pointed out.

Observations on the Plague.

As the work entitled "Observations on the Disease called the Plague, the Dysentery, and the Ophthalmy of Egypt, and on the means of prevention, &c. &c. By P. Assalini, M. D. one of the chief surgeons of the consular guard, &c. &c." is but little known in this country; and as it conveys the sentiments of a man who was much experienced in those diseases; it may prove satisfactory to our readers to be acquainted with his opinion relative to the contagion of the plague—we therefore, have extracted the following from the work itself.

" Whether this disease be really contagious ?

" Contagion has been distinguished by authors into volatile contagion and fixed contagion. The plague, which is certainly of all diseases the most severe and most fatal, has been supposed to arise from fixed contagion ; and, according to the established principles of lazarettos, it has been judged sufficient to avoid immediate contact to escape the plague, and that hindering all communication will arrest its progress : without this precaution, they pretend that the disease is communicated, and propagates itself from one country to another.

" I have seen a great number of persons who have been attacked by the epidemic, after having had communication with others, who were already sick ; and I would have adopted the conclusion, that it was to the contagion they ought to attribute their disease, if I had not also seen a much greater number who continued to enjoy good health, in spite of the most decided communication. I have even seen several individuals contract the disease, and die, although they had been living shut up, according to the manner of the Franks. I should have thought it right to conclude, that the disease of which we are now speaking was contagious, had I seen the Egyptians and Syrians fall under its influence as well as our soldiers, with whom they had constant intercourse. As soon as any one of our men was attacked, two Turks led or carried him to the hospital. There is no doubt that several of them shared the clothes of infected persons, without contracting the disease. If it had been contagious, as is pretended, it would not have been possible to have arrested its progress in Lower Egypt, nor to have hindered its spreading to Cairo. The lazaretto established near Boulac was at that time of very little use towards effecting so important an object. It is well known, that the fear of quarantine only caused the inhabitants to devise schemes to elude the vigilance of the guards of health, and custom house officers. Several Frenchmen and superior officers coming from Alexandria and Damietta by the Nile to Cairo, to avoid being detain-

ed for five days in quarantine, landed, with their horses, about a league from Boulac, and entered Cairo without performing it. How many paquets and letters coming from Alexandria and Damietta, where the disease was raging, entered Cairo without producing any bad effect! What I have just said of the soldiers coming from Lower Egypt will apply to those who came from Syria, where the same disease had broken out.

“ In the month of Floreal (April, May) three soldiers coming from Bekaire-Tel-Agy, a fort situated three leagues from Cairo, where this disease had shown itself, were conducted to the hospital of Ibrahim Bey: they died two days afterwards. These men had intercourse with more than sixty persons. The committee of health gave it as their opinion that they died of the plague, and ordered this hospital to be put under a strict quarantine; during the course of which not a symptom of the plague occurred, nor even a single death; although just before there had died more than two every fortnight.

“ After the death of several medical officers at Jaffa, General Grézien, commanding this province, recommended to the commissary of war, a native, who had the reputation of being an excellent physician for the plague: it was agreed that he should prescribe under the inspection of a French surgeon. This man opened the buboes indiscriminately, his knowledge in medicine not being extensive. For several years he had attended such inhabitants of Jaffa as were attacked by the plague, and he used no precaution whatever to preserve himself from this complaint, nor to avoid contact. I have seen him get up with his bare feet on the bed of General Grézien, covered with sweat, and take him by the arms to change his posture, although he was then attacked with a carbuncle, of which he died an hour afterwards. When he had opened the buboes with his bistoury, he took a bit of lint, or a little charpee, to wipe it, after which he placed it between his forehead and his turban: he went in this way from one patient to another, not only in the hospital, but even throughout the city, and did not put it back into his case, until his visits were over. Citi-

zeus Desgenette and Larray, the one physician, the other surgeon in chief to the army of the east, as well as several others of my colleagues, exposed themselves as much to the contagion without suffering any inconvenience. It would be tedious to mention here all the particulars. Citizen Larray, besides the operations practised in this disease, opened several of the dead bodies, and examined with great attention all the parts, but particularly the buboes, and the state of the lymphatic glands, all of which were in general found more or less enlarged. Citizen Desgenette pointed out to me two punctures, which he had made on himself, while in Syria, with a lancet dipt in the pus of a bubo: he made this inoculation, persuaded that the disease was not contagious, and both of these learned and zealous staff officers have continued to enjoy good health. The Commander in Chief Bonaparte, great in every emergency, braved, on several occasions, the dangers of the contagion. I have seen him in the hospitals at Jaffa, inspecting the wards, and talking familiarly with the soldiers attacked by the epidemic fever and buboes: a conduct which produced the best effect, not only on the spirits of the sick, but of the whole army. This heroic example encouraged at the same time the hospital attendants, whom the progress of the disease, and the fear of contagion, had alarmed considerably. I know that the advocates for contagion cite examples of persons and very large families who have died, because they had touched the sick, or the effects belonging to them, which, in their opinion, contained the germ of the disease: but they do not foresee, that it would result from this reasoning, that what they say of this disease, may be said of the ophthalmy of Egypt, the fevers of Mantua, and, in fine, of all epidemics."

His observations on the use of frictions with oil, may also be acceptable.

"It has been observed, that those people who manufacture or carry oil, are never attacked with the plague. Hence, it has been maintained, that frictions of tepid oil prevent or cure

this disease. The result of the observations made by Father Louis of Padua, director of the hospital for the plague at Smyrna, is the most favourable. He asserts, that during the twenty-seven years which he has been in this situation, he has seen no means employed against this disease more useful than frictions of oil; and to this day, in Smyrna, and several other lazarettos in the Levant, frictions of tepid oil are generally adopted as the best remedy. As soon as a patient, attacked with the plague, is received into the hospital at Smyrna, he is taken into a close chamber, where they light a large pan of coals, in which they throw sugar and juniper berries, or other perfumes; they then strip off all his clothes, and rub his whole body with warm oil, until profuse sweats break out. The patient is then put into bed; and whenever the sweating ceases, they repeat the frictions in the same manner, and so on successively during several days, until the disease has spent its violence in consequence of the sweating. One pint of oil is sufficient for each friction, taking care not to commence the second before the sweating occasioned by the first has ceased. Those who rub the patient take no other precaution than that of avoiding his breath; and in this way none of them have ever caught the disease.

“ In the space of five years, two hundred and fifty persons infected with plague have been received into the hospital at Smyrna, and I am assured that all those who were thus treated, have recovered, and that the number of persons preserved from the plague by frictions of oil is immense.

“ In whatever way oily frictions act on the human body, one thing is certain, that in the mode practised at Smyrna, they are useful. In my opinion, the tepid oil softens and relaxes the skin, opens and sets free all the pores or extremities of the exhaling vessels, whilst it produces quite a contrary effect on the terminations of the lymphatic absorbents, which it closes up and obstructs.

“ During the fever, the skin is commonly dry and shrivelled, the extremities of the exhaling vessels, or pores of the skin, are closed, and present too great a resistance to the more liquid part

of the blood, which is retained in the mass of fluids. This does not happen when the texture of the skin is relaxed, and the pores open. Besides, the oil contributes to cleanse the skin more than any other fluid, and absorbs, at the same time, a part of the caloric accumulated on the surface of the body; hence, perspiration and profuse sweats follow, which alone cure these diseases."

The sources of the malignant fever at Alexandria, Rosetta, and Damietta, are well pointed out by this gentleman in his work, as follows:—

" Alexandria is a city celebrated in ancient history, situated at $31^{\circ} 13' 5''$ northern latitude, and at $27^{\circ} 35'$ of longitude from the meridian of Paris. It is washed by the sea on the west and the north, and on the east and south are situated the lakes Marcotis and Madiez. Rosetta is situated at $28^{\circ} 8' 30''$ of longitude from the meridian of Paris, and at $31^{\circ} 25' 20''$ of northern latitude. It lies about two leagues from the sea, upon the left bank of the Nile: to the eastward, on the other side of the Nile, there are a great number of flat grounds, which, after the inundation of the river, form very numerous and extensive marshes.

" Damietta, the third celebrated city on the coast of Egypt, on the eastern bank of the phatnitic branch of the Nile, lying in $29^{\circ} 29' 15''$ of longitude from the meridian of Paris, and $31^{\circ} 25' 43''$ of northern latitude, has the sea and the lake Menzaleh to the north, and is divided by the Nile. The fields of rice which surround this city contribute to infect the air; besides, there are several lakes, pools, and marshes in its environs, which render it very unhealthy. Senanieh, among others, is a village remarkable for its insalubrity.

" The heavy rains which fall during the winter at Damietta, at Rosetta, and Alexandria, contribute greatly to produce diseases, which the south winds, the fogs, and exhalations of the marshes render more dangerous. It is asserted that these diseases are more frequent when the inundations of the Nile are

high, and of long duration. The inundation of the year 6, (1798) was one of the most considerable; notwithstanding which, the disease did not show itself but in those cities on the coast of the Mediterranean.

“ The other cities of the Delta, Boulac, Cairo, Gizèh, and the whole of Upper Egypt, were preserved from it. In the fort of Birket-El-Agi alone, a few deaths happened from a suspicious disease, which, in my opinion, without having recourse to contagion, were occasioned by the evaporation of the stagnant waters of the *Lake of the Pilgrims*, so called on account of the meeting together, at this spot, of the grand caravan, which every year sets off from Cairo for Mecca. The putrefaction of aquatic plants, and of the immense quantities of fish in this lake, contributed to its developement.

“ In the ancient histories of Egypt, there is no mention made of the plague. The former inhabitants of this celebrated country either did not distinguish this disease from others, or were unacquainted with it.

“ It is certain that Alexandria, Rosetta, and Damietta, as well as the whole surface of Lower Egypt, are so much changed, that formerly these places might have been the most healthy parts of Africa. The ruins of entire cities, destroyed and overwhelmed; the majestic remains of ancient monuments, preserved in spite of the overthrowing action of time, which at this day are in part submerged and surrounded by water, are sufficient to prove the revolutions which this part of the globe has undergone. The profound and interesting researches made by General Andreossi, and by the respectable body of philosophical men and members of the French-Institute in Egypt, are worthy of examination: they are preserved in the Egyptian decade.

“ At this day the lakes, the marshes, and the filthiness which one finds in the cities of Lower Egypt, are the principal causes of the frequent diseases to which they are subject, and which can never be eradicated until we have found means to purify the atmosphere of their environs. This important

advantage may be obtained by draining off the waters of the lakes, and filling them up; by keeping the cities clean, paving them, and giving a free exit to the rain water, which, stagnating in different parts of these cities, becomes corrupted, and, conjoined with filths, infects the atmosphere. By similar operations, several cities and provinces in Europe, America, and the Indies, have been rendered healthy. I have no doubt that the salubrity which we at this day enjoy in France and Italy, is the result of the amelioration of agriculture, and the perfection of the arts."

Extract from sundry Resolutions agreed upon at the original Vaccine Pock Institution, London.

1. *Resolved*, That it appears from the numerous reports that have been transmitted or attested by the members of the medical establishment from abroad, from our own country, and from their own experience, that the proportion of failures in the cow-pock inoculation, to give security against the small-pox, which have been published, does not amount to more than 50 out of 250,000 vaccinated persons.

2. *Resolved*, That it does not appear on examination of the published reports of these failures, and the investigation of many of them by the medical establishment of this institution, that *ten* have been substantiated by admissible and adequate evidence.

3. *Resolved*, That it seems more than probable, that all or many of even the admitted of failure according to the evidence produced, are liable to be deceptions, on the same grounds as in the asserted cases of the occurrences of the small-pox, subsequent to the small-pox.

4. *Resolved*, That, considering that the cow-pock inoculation has been the practice of producing an affection which practitioners in the first instances in general had not previously seen, and the history of which was so little known, and considering

the greater deceptions than in the small-pox inoculation to which practitioners are exposed, it was to have been expected that a much greater proportion of supposed failures would have occurred.

5. *Resolved*, That it does not appear that a single instance has occurred of the small-pox, subsequent to the cow-pock, during more than five years practice at this institution; for, on enquiry, two instances which were said to be such were found to be inadmissible cases, viz. one of them on account of the supposed cow-pock preceding, being only a local affection; and in the other, that it was only proved that there was a local affection from the variolous inoculation.

6. *Resolved*, That the numerous instances of exposure of vaccinated persons to the small-pox since the commencement of the practice in January in 1799, and likewise of repeated re-inoculation with small-pox matter at this institution, and which have been communicated, establish the fact, that a person who has really gone through the cow-pock is incapable of the small-pox, on as firm ground as the fact of variolous inoculation giving security against the small-pox.

7. *Resolved*, That considering the novelty of the practice of vaccine inoculation, and that it has not been performed in many instances, after such a mode as might give the greatest chance of security; it is advisable to take precautionary measures with many who have been inoculated, or who shall undergo the practice in future.

8. *Resolved*, That the tests of patients who have been inoculated being secure, are, exposure to effluvia and contact with persons in the small-pox; inoculation with small-pox matter, and re-inoculation with vaccine matter. But, for reasons set forth in a memoir read at the quarterly meeting by Dr. Pearson, the repetition of re-inoculation with vaccine matter is a preferable test; for, it does not appear, from abundant evidence brought forward by the experience of Dr. Pearson, that a person who has gone through the cow-pock is susceptible of it a second time.

9. *Resolved*, That such practitioners as are desirous of seeing proofs of the proposition last stated, that a second inoculation for the cow-pock is an equally decisive test of the question of the susceptibility of a vaccinated person to take the small-pox as inoculation with variolous matter, be invited to attend at the institution, for that purpose.

10. *Resolved*, That although it is probable, from the amount of the deaths by the small-pox in the bills of mortality in two preceding years, viz. in 1803, of 1202; and in 1804, of 622, that the proportion of deaths by that disease has been diminished by vaccine inoculation; yet it does not appear justifiable to draw this conclusion positively at present—because, in former years, previously to the new practice, even a still smaller proportion occurred by small-pox, viz. in 1795, there were 1040; in 1797, there were only 522; and in 1799 there were 1111: therefore that it will require at least five successive years of vaccine practice to draw a just inference.

11. *Resolved*, That Dr. Pearson be requested to allow the memoir on the state of the practice of vaccination, and on the conduct of it, to be printed, in order to quiet the minds of many families disturbed by the late unfavourable reports.*

12. *Resolved*, That the medical establishment continue their practice of registering their observations, as the most likely means to reduce to certainty the vaccine practice as a prophylactic of the small-pox.

Phiseldock, on the preparation of Corrosive Sublimate.

It is well known how much apothecaries, desirous of preparing their own medicines, are indebted to Mr. Westrumb, for having furnished them with a method of preparing corrosive sublimate without being exposed to the dangerous vapour it emits during the sublimation. For some time past I have employed myself, merely from scientific views, in preparing corrosive sublimate according to this method. But however much

* This will appear in our next number.

I may be sensible of the advantages of this process, I cannot help regretting the loss sustained in the nitric and muriatic acids, which in general cost so much trouble and expense before they can be obtained pure. I reflected a long time on the means of avoiding this loss, and at length discovered a process much more economical than that of the chemist Hameln. The question was, to dissolve the mercury in the cheapest concentrated acid (this acid, without doubt, was the sulphuric acid), and to present to the oxyd of mercury the muriatic acid without having separated it from its alkaline base. I resolved then to prepare a solution of mercury in sulphuric acid, and to decompose the sulphate of mercury by muriate of soda. I then hoped that I could easily separate the two salts that were formed by crystallization, as the sulphate of soda for its solution took only eight parts of cold water, whereas corrosive sublimate takes 162; but I found that after the first crystallization the two salts mixed, and that no other means of separating them remained but by alcohol. I shall pass over in silence, the operations which were attended with more or less success in this point of view, and describe only the process which I definitively adopted.

I introduced into a tubulated retort two ounces of mercury and three ounces three gros of concentrated sulphuric acid; I then adapted to the retort a receiver, without luting it, and made a pretty strong fire. During the solution there was disengaged a very considerable quantity of sulphureous gas. When nothing remained in the retort but a white mass, I added a solution of five ounces and a half of marine salt in six ounces of water, and exposed the mixture to strong ebullition for half an hour. A complete solution took place. I filtered the liquid while it was in a state of ebullition, put it into a retort, and distilled it to dryness. On the remaining mass I poured sixteen ounces of alcohol, and caused it to digest for some hours. I then decanted the liquid from off the residuum, filtrated it again warm, and put it once more into the retort after I had washed it, taking care not to spread any of it in the neck of the retort, and distilled it to dryness. I must here

remark, that the distilled liquid, which at first had the colour of Malaga wine, assumed, after the solution was concentrated, the colour of water de Rabel; and the saline mass, after the complete evaporation of the alcohol, was exceedingly white. Lime water made no change in the colour of this liquid.

I poured over the mass in the retort twelve ounces of water; I boiled it to solution, and, having filtered the liquor, exposed it to crystallize. Very beautiful crystals in the form of elongated prisms were deposited. I then poured over the residuum eight ounces of new spirit of wine, and again obtained a considerable quantity of corrosive sublimate. The distilled liquid, after being rectified on half an ounce of potash, was perfectly pure.

By employing this method, corrosive sublimate, in my opinion, will cost one-half less than by Westrumb's process. Sulphuric acid costs only one-third of what the nitric acid does; and there is no comparison between the price of pure muriatic acid and that of marine salt. I therefore flatter myself that this method will meet with a favourable reception.

Med. & Phys. Jour.

Helm, on the Digestive Power of the Human Stomach.

The author having the care of a woman, 58 years of age, who suffered under a remarkable disease of the stomach, took the opportunity of making several observations on the action of the stomach on different aliments. The subject of his observations had always enjoyed a good state of health, till she was married in her thirty-third year of age, when she was frequently attacked with cholics, vomitings, a redness, a burning and pungent sensation in the region of the stomach, which symptoms generally returned every third week, but were less violent in time of pregnancy. A blister, applied on the painful place, relieved her greatly, and during the space of one year, she found herself free from pain. After this time, she became pregnant, and about the middle of this state, she ob-

served a tumour in the region of the stomach, of the size of a walnut, which had the same colour as the skin, and was painful. After the delivery, those symptoms recurred with greater violence, and were almost insupportable in rainy weather. Appetite good. The tumour began gradually to increase and to become hard till it reached down to the navel, and an anasarca supervened. Thus it remained till the next year, when the tumour being accidentally pressed, broke open, and about a pound of yellow purulent matter issued, when her sufferings diminished, together with the anasarca. The opening was of the size of a small pea, and small particles of aliments came forth from it. Mr. H. being sent for about this time, found the patient weak and emaciated; the opening gradually increased, so as to let a finger pass into the stomach; a prolapsus of the opposite side of the stomach supervened, and a catheter could be introduced as far as the pylorus, without either much incommoding the patient, or causing vomition. In this state, the patient remained five years, and during this time the author made the following observations. The food of the patient was extremely simple, wine causing much pain. Some hours after her meal, she had violent pains in the back, reaching thence to the left side, and particularly a burning sensation about the edges of the opening, and she was generally obliged to loosen the bandage, and to let the contents of the stomach issue, while she relieved the pain by drinking milk. When the weather was fine, she had neither hunger nor thirst, and sometimes fasted for about thirty hours. The taking of sour crout or pickled cucumbers, salad, and sour cherries or apples, gave her the least pain, but any flatulent food she could not keep above an hour in her stomach. In bad weather, she felt a great deal of pain, and the prolapsus increased. Any violent motion would immediately make a good deal of gall run into the stomach, from which it issued through the external opening. Milk coagulated instantly after it came into the stomach, either through the mouth or the opening, which however arrived a little later, when the stomach had been washed with

water; asses milk coagulated latest of all. The patient was never obliged to bring out any spittle, nor could she be made to vomit by a mechanical irritation. Stools followed regularly every second or third day; urine was yellowish and cloudy; pulse 80—85 in a minute, and after the taking of spirits, it became 112—120 in a minute, and then the food issued with force out of the opening. A solution of one grain of emetic tartar being brought into the stomach with a syringe, caused much trouble, and a burning sensation, and the peristaltic motion of the stomach could be clearly seen. The pains were relieved by milk; and after three hours, she had four watery stools.

The results of other experiments with aliments and medicines are as follow: white bread of all sorts was more easily digestible than brown or black bread. Peas and lentiles were more digestible than beans. Pears and pine-apples more than apples. Peaches, apricots, plumbs and figs were easily digestible. Chestnuts, nuts, and sweet almonds were almost indigestible, with and without the epidermis. Turnips and potatoes were very digestible. Sallad and different sorts of cabbages, prepared with vinegar, were easily digestible. All sorts of champignons were difficult to digest. Veal, lamb's flesh, and pork were more easily digestible than beef, mutton, and flesh of a wild boar; not so easily as from a hare or other venison. Chickens, pigeons, &c. were more easy to digest than geese or duck's flesh. The intestines of animals were easy to digest; ham was easily digestible; all sorts of fish were soon digested. Sixty grains of Peruvian bark had lost, after having remained from six to ten hours in the stomach, ten grains; the extracts of bark, cicuta, aconitum, had lost in the same time, twenty grains; gummi guaiacum, limatura martis, and antimonium crudum, from ten to twelve grains. Castoreum, wax, assaetida, and rusty iron filings remained insoluble; ten grains of camphor, were within six to twenty-four hours, diminished from four to six grains. Gum arabic was quite dissolved; sixty grains of g. ammoniac lost often, in ten or twelve hours, from eighteen to twenty grains. The weight of magnesia us-

ta, was increased twenty grains in the same time, and shewed no more any effervescence with acids. Flores sulphuris alone were insoluble, but by the addition of a neutral salt they became a little soluble. *Ibid.*

On resuscitation from Death by Lightning.

So many deaths having lately occurred from lightning, without any apparent attempts to restore the unfortunate victims ;* it will not appear unseasonable to extract the following from the annual Report of the Royal Humane Society, for 1804. We cannot omit to observe that we consider attention to other causes of suspended animation, as much the duty of the Humane Society of this place, as to the only source they appear to notice, that of drinking cold water. It is more than mere parade, that has rendered the parent society in Great Britain, of such importance ; by whose philanthropic exertions, 2869 men, women and children, have been restored to life.—E.

“ Suffocation by noxious Vapours or Lightning.

Throw cold water often and repeatedly upon the face, &c. at some distance, and with force, drying the body at intervals. If the body feels cold, apply warmth gradually ; and then employ the usual plan of the drowned.

Lightning.

“ Persons struck dead by lightning have been often considered by many people as the immediate objects of Divine wrath ; by others, more charitably inclined, as the peculiar favourites of heaven ; while it has been concluded by both parties, that any attempt to restore them must not only be vain, but presumptuous. The success of the Royal Humane Society has corrected popular prejudice, and proved that persons, provided no fatal laceration ensued, may be restored to life.

* One successful attempt has been recorded within a few days, in some of the news papers.

ADDRESSED TO THE TREASURER.

Fakenham, April 19th.

“DEAR SIR,

On the 12th of April, a storm of thunder and hail suddenly came on, succeeded by a most vivid flash of lightning. I was requested to visit J. Mitchell, who was struck dead with lightning; and had been an apparent corpse half an hour; his eyes were much dilated; and the countenance exhibited a ghastly appearance.

Visible marks of the electric fluid were on his knees, ankles, and feet. I commenced the plan recommended by your highly-valuable Humane Society, which, in three quarters of an hour, was productive of spasms, and the return of animation. My patient took to his bed for some days; but, by strict medical attention, he is now perfectly restored.

Mr. Isaiah Gilbert to the Rev. Mr. Steele.

“On the night of the 25th of June, the house of Mr. W. Martin was struck with lightning. Mrs. M. was affected in her right arm. She rolled herself off the bed, and discovered her husband an apparent corpse. The water was driven in at the door: upon putting her right-hand into the water, she felt immediate relief. She dragged her husband off the bed; and, after some time, ordered buckets of water to be poured on his head. Mr. Martin moved, and raised himself on his hands. In a quarter of an hour he stood upon his feet, and, in a wild manner, cried out, “What are you doing?” His wife informed him they had been struck with lightning; he soon became composed, although in great pain; but, in a few days, life and health were perfectly restored.

India Arms, Blackwall, July 2, 1803.

Gratuitous Delivery of the Resuscitative Procefs.

“During the thunder storm, the lightning struck Mrs. Colley dead to appearance. By a perseverance of two hours in the Humane Society’s process, convulsions appeared, which terminated in a gradual return of life.

Eleven persons, apparently struck dead by lightning, providentially restored by the Humane Society. These important facts prove, resuscitation is as practicable as in those who are suffocated, strangled, or drowned.

Fulminis afflatus interdum vivere telis
Vidimus et refici ——— VIRG."

After the above strong proofs of the utility of the measures pursued, it is hoped some exertions will be made to rescue a fellow-creature from otherwise certain death.—*E.*

Mr. James Humphreys has just announced his intention of printing "Practical Observations in Surgery, illustrated with cases and plates. By William Hey, Esq. F. R. S." &c. &c. a work, which from its estimation in Europe, we doubt not will prove highly acceptable to the medical profession throughout the United States.

DEATHS.

Lately in England, William Buchan, M. D. well known by his treatise on "Domestic Medicine," a work than which few have had a more extensive circulation.

NOTICE TO MEDICAL STUDENTS.

THOMAS T. HEWSON, proposes next winter to open a room for Practical Anatomy. The time to be devoted to the class will be for teaching the arts of dissecting, injecting, and preserving the animal body: also, for demonstrating such subjects as may occur from dissection.

February 25th, 1805.

DRS. DEWEES and CHAPMAN will commence their annual course of lectures on the theory and practice of midwifery, early in November.

June 28th, 1806.

The lectures on the principles and practice of midwifery, and the diseases of women and children, by Drs. JAMES and CHURCH, will commence on the first week of November next.

Their pupils will have the privilege of attending parturient women in the lying-inward of the alms-house, as well as at their own houses.

July 21st, 1805.

Our correspondents are particularly requested to give titles to their respective communications.

ERRATA.—p. 149, of vol. 1, 2d line from bottom, for *regular* read *irregular*.
Vol. 2d, p. 34, add "of Loudoun county," to the name, in the title of the communication.

MEDICAL MUSEUM.

VOL. II.....No. II.

Some Account of the Diseases that occurred on board the Ship China, during a Voyage from Philadelphia to Batavia, until her return to the Delaware. Communicated to the Editor. By STUBBINS FIFTH, M. D.

THE China of 1008 tons, ten guns, and eighteen men, left New Castle, June — and after a short detention by contrary winds at Bombay Hook, proceeded to sea on the 28th of June, 1804. We had a passage of — days to the line, and arrived at the Cape of Good Hope, September —

During our run from the capes of Delaware to the line, some cases of diarrhoea, a few of catarrh, three of chronic rheumatism, and some remittents occurred: the nearer we approached the line the more cases of disease occurred, particularly amongst a number of the Dutch passengers which we had on board. As the weather about the line was very wet, we had frequent squalls, heavy rain with calms, which kept our men busy; and the sudden vicissitudes from wet to dry, one hour exposed to torrents of rain, the next to the direct rays of a burning sun, were very unfavourable to health, and produced several cases of bilious remittents; many complained

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of vertigo, others of cephalalgia : these diseases all soon yielded to moderate blood-letting, gentle purging, emetics, and sudorifics, with sometimes an epispastic to remove local disease or concentrate the morbid excitement ; some accidents occurred, several were wounded, and two or three had fractured bones ; they did very well, and in no instance acted as an exciting cause of *disease*. It would perhaps be a good practice in ships from the northern or cold countries, to have their men well purged with a quantity of salt water, as soon as they arrive in warm climates or approach the line ; I believe it would frequently be a means of preventing the advances of disease, and would recommend it particularly to those who have no surgeon, for when men get sick at sea, when they can receive no medical aid, they are in a deplorable condition.

From the line to the Cape of Good Hope, we had no serious cases of disease ; trifling wounds from accidents occurred, slight cases of disease, a few cephalalgias, three or four cases of febricula, one of dyspepsia, and two of hemorrhoids ; but after we had been a very short time at the Cape, several cases of remittent fever occurred, owing to our men getting intoxicated on shore, and lying in that condition all night exposed in the streets of Cape Town, or on the ship's deck, but they yielded to depletion and the antiphlogistic mode of treatment. One case of mania occurred, which yielded to bleeding, blisters, cathartics, and a *salivation*, after continuing for several weeks. From the time these recovered until we arrived at Batavia, the ship continued very healthy, two or three cases of colic occurred, and we had one case of ulcer of the leg, which had been of long standing, I believe several years.

October 24th, 1804. We arrived at Batavia in good health, but before we had remained here long, disease invaded us and continued to increase during all the time of our stay, which was until the 9th of December, during which time however, we lost but one man, named Alexander Steel, of malignant fever, after an illness of ten days or thereabouts. The dif-

eases we experienced here, were fever and flux; the first put on various forms, in some cases continued, others remittent, in others it assumed the type of a tertian fever:—of dysentery we had the acute and chronic.

We left Batavia as I have before observed, December 9th, 1804, and went through the Java sea, so as to pass the streights of Balli: as the monsoon had set in with considerable force, our ship large and a *considerable number of our crew ill*, it would have been impossible for us to beat through the streights of Sunda, and had we attempted it, we should in all probability have lost great part of our men, and been obliged to desist at last. In coasting along Java and Madura, we had very light winds with frequent calms, during which the heat was so intense that it was scarcely to be borne, and in a number produced vertigo and cephalalgia. Owing to the frequent calms we did not make the entrance of the streights of Balli until the — instant, during which time our men were sickening daily; and even after we had entered the streights and passed a considerable way into them by beating up, we were driven back again by the changing of the current; however, after considerable trouble, at the next change of the current, we entered again and anchored before Balambuan; here we remained a day and a half, took in some water, &c. and lost one man, John Coats, with dysentery. We set sail about noon with a pleasant breeze, and beat through the streights by daylight the next day; during which time all hands were kept constantly and laboriously employed, which acted as the exciting cause of disease, for the very next day we had — taken ill, and it is remarkable that every one of the boat's crew who were on shore at Balambuan were taken down; so that the ship in a short time resembled a hospital, as we had one-half of our men ill, and two-thirds of them complaining, before we had been at sea very long. At one time during our run between the streights of Balli and the Cape of Good Hope, we had but eight well men in a watch, and they weak, as most of them had been sick; for as

fast as some got well others were taken down, and relapses were very frequent: the fever predominated most, but a number of cases of dysentery occurred with very malignant symptoms. So general had been the fever and flux, that when we made St. Helena, there were but eight persons in the China who had not been sick; however there were then only — on the sick list; and we had lost — by disease; — of the dysentery, — of the fever or effects thereof.

About this time the scurvy began to make its appearance; the fever had nearly subsided, many were very feeble, and some were confined to their beds with the effects of it; several chronic cases of the dysentery existed, and cases of the acute continued to occur. The scurvy attacked those who had been very ill previously, and who continued so much debilitated so as to be unable to take exercise; in such cases its advances were pretty rapid, and it did not appear to yield to acids or any of the antiscorbutic remedies that were exhibited. A rob made from the essence of spruce afforded an agreeable drink for them, but rarely that I could perceive, checked the disease much. The disease continued to increase during the remainder of the voyage, notwithstanding all the remedies that were exhibited, inasmuch that when we arrived, near two-thirds of the crew were more or less affected; seven died thereof before we made land, and one in the lazaretto (ill of dropsy and scurvy combined) after he arrived. Perhaps this man would have recovered had he not been exposed so much after the ship struck, and after he was taken off the wreck, being crowded in a small pilot boat for several days without the conveniences or comforts of life. Quassia, bark, and wine, supported the strength, but nothing would cure it at sea, that we had it in our power to use.

OF THE DYSENTERY.

THE dysentery commonly commenced with a degree of languor, sometimes a rigor; loss of appetite soon ensued, the patient had been costive for a day or two, or he had been afflicted with a diarrhoea which soon changed its nature, and the patient became much troubled with a disposition to go to stool, without ability to pass fæces, or with a discharge of mucus and slime streaked with blood, attended with great straining, pain in the abdomen and anus, which soon became excruciating. About this time the discharges of mucus, or mucus and blood, were superseded by pure blood; the pulse which in the beginning was moderately active and frequent, but easily compressed, (resembling what Dr. Rush has in his emphatic manner styled the soap-bubble pulse that occurs in drunkards), evincing a small degree of sthenic action, begins to sink and soon becomes weak, feeble, quick, and tremulous; the skin which at first was hot and dry, loses a part of its dryness, and on some parts of the body, especially the neck and breasts, a degree of moistness is apparent; but the feet begin to grow cold, and the hands are cold, with a cold sweat on them; the patient is forced to go to stool every few minutes, which gives him excessive torture, a prolapsus ani taking place every time: he complains of being fainty, is very dry, and wishes to be continually drinking cold water, and if indulged in it will drink large quantities; a puking takes place which is very troublesome to a patient, now almost exhausted and sinking rapidly under his disease; he moans continually, even when asleep, which is generally short, and interrupted by frequent startings and troublesome dreams, from which he awakes with but little relief of his symptoms; his abdomen is tense, hard, and painful to the touch. In the commencement of the disease, the head was sometimes affected with pain, and the eyes were red and inflamed, a puking sometimes ushered in the disease, and acrid

bile was discharged in considerable quantity. A convulsion takes place, after which the patient appears in many cases insensible, with low delirium, and inability to retain his fæces; the blood runs from him as he lies, but so thin as not to coagulate, at first of a florid colour, now dark and grumous; he has subfultus tendinum and hiccup; his countenance changes, and small purple spots appear on various parts of his body; his eyes become glassy, his nails blue, his extremities cold; his pulse weak, scarcely to be felt and intermitting, soon ceases entirely; a convulsion ensues which carries off the patient; sometimes he survives it and gradually becomes weaker and weaker until life ceases; he appears to expire without a struggle, and like a person falling asleep. But the progress of the disease was not always thus regular, even when uninterrupted in its progress by medical treatment; for sometimes there was no puking, in some no prolapsus ani, and in others no convulsion; some had little fever, while more had an intensely hot skin; some had profuse perspiration from the beginning, with an open regular pulse, but in very few cases so strong as to admit of bleeding, which I think was always injurious in the disease at Batavia, as it tended to make the patient sink more rapidly. In some cases the disease assumed an intermittent form, and in many remitted. In a number of cases it ran its course in a very few days, in some only three, in others five, while in others it ran on a considerable time, assuming a chronic nature and producing obstinate, and frequently fatal ulcers of the intestines.

Cases occurred where the disease alternated with the intermittent fever, and with the remittent; sometimes the disease would be violent for a day or two, then cease, and an affection of the liver or spleen would ensue. The disease appeared to partake more of an intermittent after we had been coasting along the shores of Java for a week, and the men had been exposed considerably, and were fatigued with beating the ship through the streights of Balli.

Of the Treatment.

I generally began the cure by giving a strong emetic, composed of the antimoniated tartrate of potash, combined with eight or ten grains of the mild muriate of mercury. This operated very smartly, during which, the patients were directed to drink very plentifully of rice water, barley water, thin oatmeal gruel or chicken water: they were enjoined to drink not less than one, and if possible two gallons, so as to clear the stomach and primæ viæ of their contents. After producing copious emesis, and discharging bile very often, it turned downwards, and operated as a cathartic, discharging acrid and bilious fæces and scybala, by which the patient was considerably relieved. At bed-time I gave a draught composed of forty or fifty drops of laudanum, a drachm of antimonial wine and half a drachm of *spt. nitri dulc. pro re nata*: this gave ease and sound sleep through the night, and commonly produced a copious perspiration, which was encouraged by wrapping the patients up in blankets, and giving warm diluent drinks; camomile tea was sometimes given for this purpose and with advantage. If the tormina of the bowels had not ceased, I now administered a mild mucilaginous injection, and gave a moderate dose of the *oleum ricini*: frequently I dissolved six grains of tartar emetic in two pounds of barley water, and gave from an ounce to an ounce and a half every hour, at the same time giving barley or rice water for their constant drink. If the griping was gone or inconsiderable, I gave small doses of calomel, rhubarb, and opium, every two hours through the day, ordering the patients to drink chicken broth, and eat some panada, sago or tapioca, and occasionally to take an ounce of warm camomile tea: by this time the state of the system was such, that I could safely and freely administer columbo, either in substance or decoction. These remedies were gradually increased according to the state of the system, and in some cases

the quassia and gentian were given instead of the columbo, and with equal advantage. During the convalescence the diet was gradually changed, the white meats were advised, and nourishing soups ordered, by which means the patients recovered their strength and spirits.

In a few cases where complete intermissions occurred in the fever, tormina, &c. I used the Peruvian bark combined with elixir of vitriol, and tincture of opium, with success.

Besides the primary remedies already mentioned, there were several auxiliary ones that ought not to be passed over in silence; these were, the warm bath, blisters, sinapisms, fomentations, and tonic and anodyne plasters applied to the superficies of the body, &c.

The warm bath I found a very valuable and useful auxiliary; it relieved the pain and tension of the abdomen, produced an equable excitement on the surface of the body, and by disposing the patient to perspire freely, induced gentle and refreshing slumbers.

Blisters and sinapisms, by recalling the excitement to the surface, and creating a new action there, generally relieved the intestines; while at the same time they afforded a new inlet for the introduction of medicines; as by dressing them with strong mercurial ointment, or simple cerate and calomel, I was enabled in several instances to produce a ptyalism; and I never lost a patient that was salivated. I derived advantage from plasters composed of mercurial ointment, extract of bark, and a small proportion of opium applied to the abdomen; sometimes I added a portion of tartar emetic to these plasters, especially if there were any tormina of the bowels existing; they were also applied to the extremities with equal advantage.

In a number of instances I derived great advantage from substituting the extract of hyosciamus niger for opium, especially where there was considerable tormina of the bowels: we all know that opium, besides its incitant and narcotic power, is an astringent, and therefore injurious when given alone in dysen-

tery; whereas the hyosciamus is the reverse, as in doses of three grains, I always found it to prove gently purgative, at the same time that it gave refreshing sleep. It appears therefore to be the desideratum so frequently wished for by medical practitioners. In all cases of acute dysentery, I think it to be a medicine of very great importance, much preferable to opium, and equally safe: some writers have observed that it is apt to produce delirium, but I never have experienced this effect from its use, and cannot avoid believing that whenever it has been produced, it was in consequence of the injudicious administration of the medicine. All active medicines will do harm when used improperly, yet who avoids prescribing them on this account? From all my experience of its use in dysentery, I am led to believe that the hyosciamus, in doses of two or three grains of the extract, *pro re nata*, may be safely used in dysentery even when there is considerable inflammation, pain and acute tormina of the intestines; that it may be repeated if necessary every three or four hours, that it is much preferable to opium in this disease, but that when the disease has become chronic, and it is necessary to employ astringents, then it will do no good, and ought to give place to those medicines which unite astringency with their narcotic virtues, as opium.

Those cases of dysentery that occurred after we had crossed the line on our return to America, and got into the northern latitudes, began to exhibit some symptoms of increased arterial action; the farther we proceeded northward the more inflammatory they became, so as to admit of bloodletting, and in some cases very freely; whereas had I performed venesection in those cases that occurred at Batavia, on the Java sea, or soon after we left Balambuan, I should have injured my patients very materially; as upon the smallest loss of blood the pulse sunk rapidly, the powers of the system being so prostrated that no reaction could possibly take place, and therefore bloodletting only tended to hasten the fatal termination of the disease.

OF THE MALIGNANT FEVER OF BATAVIA.

THE fever of the climate is in some circumstances like the *American yellow fever*, the symptoms in many instances are alike, it has a great tendency to intermit, and in a number of cases is a complete tertian; the symptoms however are various, and it is seldom seen exactly alike in any four persons, although its characteristic marks render it easily known and its frequently fatal termination evinces its extreme malignancy, as well as the little influence medical treatment has in some of the most violent cases; for there are cases which have so speedy a termination that medicine can do no good; dissolution appears to commence the instant the disease seizes the unfortunate patient, and all the powers of the system are so prostrated that it is impossible for reaction to take place, as the excitability is exhausted; and it is owing to this exhaustion thereof, in all the diseases of hot climates, that medicines can be given in such large doses, and that the diseases are so very difficult to cure, medicines in ordinary doses producing no effect. This may perhaps enable us to account for the very great diversity in the symptoms of disease in hot climates, for as the excitability is more or less exhausted, the re-action will be greater or less; and this will give origin to the various forms, appearance, and symptoms, evident in disease, which will also be influenced by the previous habits of the patient, the age, sex, and degree of exposure to the remote, predisposing, and exciting causes.

The disease frequently commences with ennui, languor, lassitude, listlessness, attended with a pain upon motion; this continues for a few hours, sometimes for a day or two, (in my own case two days,) before the other symptoms come on, then follows a rigor, (but the most malignant cases are without,) succeeded by a pain in the head, generally in the forehead; sometimes the head is free from pain while the limbs are violently affected, and there is great pain in the back: soon the patient

complains of pain in the epigastric, and sometimes in the umbilical, region, attended with vomiting, and frequently a copious discharge of bile, but I have seen cases where no bile was discharged. The pains soon become excruciating, the eyes red, sometimes of a dingy hue, occasionally uncommonly brilliant and sparkling. The pulse frequent, full, and soft or small, quick, irregular and jirking, often intermitting and very easily compressed; *very rarely hard or tense*, and sinking rapidly after bleeding; the skin, hot, dry, and smooth, the face swelled, the body occasionally appeared puffed up as though the patient had tympanites: in a very few cases spontaneous perspiration ensued early in the disease, but this occurred more frequently after a few days continuance; the rigor that ushered in the disease was succeeded by a fever, sometimes attended with delirium, and generally continued for two days, when it subsided, an intermission ensued, and the patient appeared free from disease but much debilitated; this intermission continued for about twelve hours, more or less, when another paroxysm ensued, attended by a chill; in this, delirium was much more frequent than in the first; it was never of the raging kind, but commonly low, as occurs in the typhus mitior: the second paroxysm continued for twelve or eighteen hours, when another intermission took place, but left the patient very weak and feeble, unable to sit up without fainting; the pulse being *remarkably quick and weak, the eyes yellow*, the skin of the neck and face tinged of the same hue; the patient now perspires copiously, his voice is low, his speech slow, his intellects natural, a morbid irritability of the sense of feeling frequently exists, the slightest touch causing pain. The nausea is very distressing in the third paroxysm, and sufficiently troublesome in the first and second. He continues in this state growing weaker and weaker until the third paroxysm takes place, which frequently carries him off: sometimes he survives even the fourth—and cases occurred where it degenerated into typhus, and continued for thirty, and in one case for forty-two days; but more frequently it becomes a complete tertian, occurring every other

day, and preceded by a violent chill, which frequently lasted for an hour. Cases occurred where the patient was attacked with malignant symptoms; soon the disease assumed a tertian form, which after continuing for some time became remittent, and afterwards typhus.

I must here observe, that cases occurred in which few or none of these symptoms were seen; some complained only of a little nausea, appeared stupid and inclined to doze, but without pain: others were weak and feeble, had no uneasiness or pain, yet a wildness in the eyes was perceptible. In both these forms of disease the patients frequently walked about until a few hours before death, and even after the absence of pulse at the wrist. Besides the symptoms already mentioned, there were others that indicated greater or less danger to the patient; for instance, a swelling of the *alæ nasi* and upper lip was a sign of recovery, so were boils breaking out in the face, neck, or any part of the body; they frequently occurred after blisters, and on the parts to which they had been applied; in some they matured perfectly, in others not. I observed that where they suppurated perfectly and kindly, the patients quickly recovered; but where they were a long time in coming to a head, the discharge was thin, ichorous and bloody, and the patient had a very tedious convalescence, and was very subject to relapses. Some recovered who had no boils. These sometimes had an eruption on the skin like urticaria, and in some cases similar to the *essera*; in a very few like the *psora*. Some had an eruption like the prickly-heat; others like the scarlatina. Those who died had neither eruptions nor boils. A sore throat was a frequent symptom, and generally favourable. A diarrhoea was frequent in the beginning of the disease, but sometimes an obstinate costiveness attended. I saw no great disadvantage from a diarrhoea in the beginning, but when it came on near the crisis, it was extremely alarming and dangerous, as it carried off the patient very soon, and in some cases baffled all medical efforts to stop its progress.

An intermitting pulse was in general a dangerous symptom; absence of pulse occurred in a seaman of the name of Beggs, for five hours; it then returned, and he survived for thirty-six hours after.

A delirium was a dangerous symptom. All those who died (one excepted) had it, but some recovered who were afflicted with it to a violent degree. A deafness occurred in some; it was a dangerous symptom, being generally fatal; *very few recovered* who had it.

A deficiency of vision was very common. Many complained that they could scarcely see, and some of the convalescents on walking a few steps, were taken with blindness, and vertigo, and fell down immediately. In all, the eyes were remarkably weak. The recoveries were very slow, and relapses frequent.

When the disease appeared in the intermitting form, it was less dangerous than when it assumed the continued or remittent type. When remittent, it generally degenerated into an intermitting; but some instances occurred where the intermitting became remittent; then continued, and lastly, typhus.

Some had an enlargement of the liver, and numbers had an enlargement of the spleen. In some, the enlargement of the spleen was very troublesome and painful; in others, it gave no pain, but occasioned a sense of weight, oppression and nausea; others scarcely experienced any inconvenience from it. In one case it suppurated, and occasioned sudden death by discharging internally. Whenever the liver or spleen became affected, it protracted the recovery of the patient, disposing to frequent relapses. A yellowness of the eyes was a common symptom, though not a very dangerous one. It occurred in the worst cases; however, I saw it in many who were not violently affected. Great debility was a dangerous occurrence: I think I never saw any disease which so soon debilitated men; the strongest and most robust were in a very few days rendered as helpless as children. The old, the infirm, and those who led irregular lives, suffered most by it; but

none were exempt from its influence : eight persons only of the whole crew, (seventy-six in number,) escaped both the fever and the dysentery. The fever appeared to alternate with the dysentery ; when the weather was bad the latter prevailed ; when good, the former. In some cases the fever would attack the dysenteric patients ; but more frequently, patients who were affected with the fever, would be seized with the dysentery. Cases occurred of persons being seized with the fever, upon which the dysentery would supervene ; and after continuing a few days, cease, and the primary disease again recur, thus alternating one with the other. Borborigmi was a symptom of convalescence. Great thirst attended the fever, and was a dangerous symptom ; nausea was a very troublesome symptom, and dangerous near the crisis. Hiccup was always *very unfavourable*, being one of the last symptoms that occurred before death.

The skin was in general intensely hot, so that the hand could scarcely be kept five minutes on the bodies of the fever patients without experiencing pain ; and I observed that the more ardent the fever, the greater was the danger of the patient. By the heat of the skin, &c. this disease answered to the true *Causus* of authors.

A disagreeable, cadaverous odour, accompanied the disease, and the greater or less degree thereof indicated greater or less danger to the patient. The cuticle of the convalescent generally separated from the cutis vera and came off ; whenever, therefore, I saw the cuticle separating, I had great hopes of my patient, and was enabled to prognosticate a favourable termination, in which I was never disappointed. A cold skin, with low muttering delirium was a dangerous symptom ; coldness and torpidity of the extremities were always unfavourable. Involuntarily passing of the fæces and urine were very dangerous omens ; the inability to pass urine was likewise unfavourable. It was generally of a blood-red colour, though in some it appeared of a dirty brown colour,

and was discharged with pain : these generally were very bad cases. Some cases, where it deposited a dark lateritious sediment, terminated favourably. A tremor, picking at the bed-clothes, low muttering, or a loss of speech, were generally fatal symptoms.

Method of Cure.

The treatment was very different, as the disease varied its appearance or type, and as the symptoms, indicated. However, it frequently admitted of a little evacuation, and whenever the state of the system would permit, the antiphlogistic remedies were used ; but in the greater part of the cases it was necessary to pursue the Brunonian practice, or tonic plan of cure, from *almost the commencement of the disease.*

I did not see a single case that would admit of blood-letting ; but found in the beginning, if the fever was very high, the thirst great, and the eyes of a dingy red, that smart cathartics were of great service. I generally gave jalap and calomel, but in some cases used Glauber's salts, and gave cremor tartar and water for drink : I had the patient placed where he could have the benefit of a free circulation of air. Enemata were exhibited every two or three hours during the paroxysm, with advantage. Emetics were useful ; they discharged the acrid and sometimes bilious contents of the duodenum and stomach. During the operation I gave large quantities of barley water, or weak camomile tea moderately warm. By these means the primæ viæ were cleared of their contents and a diaphoresis was induced. If the patient did not sweat freely, I now gave acetate of ammonia in small doses, frequently repeated, or a mixture composed of antimonial wine, laudanum, and spiritus nitri dulcis, pro re nata ; which seldom failed of producing the desired effect. Sound sleep ensued, and a remission of the fever followed. Blisters were then prescribed, and applied to the extremities. If the head continued affected

I applied one to the back of the neck, or two behind the ears. If the patient complained of uneasiness in the stomach, one was placed on the epigastric region. They were suffered to remain on for a considerable length of time, after which they were taken off, and the parts dressed with very strong mercurial ointment, with a few cantharides in it. In a number of cases I sprinkled calomel all over the vesicated part and applied an unguent composed of simple cerate and calomel. By these means I in several cases produced a gentle pyralism; all symptoms of disease vanished, and the patient quickly recovered.

In several cases where no disposition to remission appeared, blisters were applied with the best effect in producing one. After a remission had taken place, they were remarkably useful in removing local disease, concentrating the excitement to the surface; and thus relieving parts essential to life, from the effects of morbid action. I applied them on Mr. John Hunter's principle, and with the happiest effects; for as no two actions of unequal force can exist at the same time in the system; so blisters, by transcending the morbid action, cured the disease; for which purpose I kept them open for some length of time, and wherever the patient complained of pain, applied one over, or as near the part as possible. After a remission had taken place, they had great effects in preventing an accession of the disease, and I always applied one or two at the time I expected the paroxysm to commence.

Whenever the liver or spleen became affected, I found great advantage from a blister over the part, and kept open for several weeks. In fine, for this disease, in all its various symptoms, and Protean forms, blisters are a *sine qua non* in the treatment, and whoever expects success must employ them.

As soon as a remission took place I exhibited tonics and irritants. The Peruvian bark was the most powerful. I gave it in the commencement in small doses, frequently repeated. In some cases I combined an aromatic with it, especially where it lay heavy on the stomach. Many could take it when com-

bined with cassia and nutmeg, that could not without; to those who could not take it in substance, I gave the infusion, decoction, and Huxham's tincture; the latter was very grateful to the stomach. The dose was gradually increased as the stomach could bear it, or the indications of the system required it. Where great debility existed I applied it in fine powder to the extremities, to the breast, and back of the neck. In one case where it could not be kept on the stomach, the patient derived great advantage from having it quilted between two pieces of muslin, and tied round his body—at the same time that large plasters of the extract were applied to his arms and legs. I found, in several cases, a plaster of the extract applied to the epigastric region, produced very pleasing effects. A decoction of bark used as a bath was very advantageous. On account of the expense attending this method of using it, oak bark was substituted for the Peruvian, and appeared to answer nearly as well. When a patient's legs and feet were placed in a strong decoction of oak bark, the effect produced was as great as if he had taken half an ounce of the cinchona. Cases occurred in which I was necessitated to give two and three ounces of bark daily, or I should have lost my patient. I found the extract to answer better than the cortex, on account of its smaller bulk, in cases that required such powerful stimuli, as it was less liable to produce a sense of oppression on the stomach. When the disease assumed a typhoid grade, or very great debility existed, I derived advantage from a * mixture composed of extract of bark,

* The following were the prescriptions—

- ℞ Gum. tragac. ʒss.
 Extract. cort. Peruv. ʒijss vel iij.
 Vol. sal. ammon. ʒij.
 Gum. opii, grs. iv.
 Aq. pur. ʒviii. m. ft. mist.—signe, to take a table spoonful every hour or two.
- ℞ Extract. amar. ʒij.
 Tinct. opii. ʒij.
 Gum. camphor. ʒij.
 Pulv. gum. tragac. ʒiss.
 Aq. pur. ʒviiij. misce et ft. mistura—signe, to take a table spoonful every two hours—if very low, every hour.

ammoniac and opium, combined with gum tragacanth and water, and given every hour. In some cases I used camphor, myrrh and extract of bark, with advantage.

Columbo was used in substance and in tincture with advantage; quassia, gentian, camomile, seneka and serpentaria, were used and alternated with the bark. In some cases where bark failed they effected a cure; but more frequently the bark would cure where they failed. The system will frequently accommodate itself to the impression of certain articles, so that their good effects are lost by habit. If in such a case a weaker tonic is given, it will cure where a stronger has failed, because its impression is new.

In several cases that resisted the use of tonics, I found a salivation to succeed; and as the liver and spleen were so liable to become affected, I found it necessary in almost every case to modify my prescriptions, if possible, so as to prevent these secondary effects of the disease from occurring, by using mercury in small, but frequent doses, when I had reason to suspect the former, and using the preparations of iron liberally, when I expected the latter. I have already observed, that where the disease was remitted and continued for some time, the liver generally became affected; but where it appeared in the form of an obstinate intermittent, an enlargement of the spleen ensued. In the former case I used calomel with the tonics; in the latter, the rubigo ferri, combined with cinnamon, was very useful. I cured several cases by the sulphate of zinc in small doses, frequently repeated. Sometimes I combined it with rubigo ferri, and am of opinion that the virtues of both were thereby improved. I derived considerable advantage from the *nitric acid* in these cases. I began with it in small doses largely diluted with water, and increased it gradually as the patient could bear, until I gave to the amount of two and three drachms per day. It produced a ptyalism in every case, but the factor attending it was different from that produced by mercury, and not nearly so disa-

greeable. I found it very useful when the liver or spleen were enlarged; in many cases preferable to mercury, as it is a tonic and can be given in cases of great debility, where mercury cannot. It is particularly well adapted to this disease, and I believe its use cannot be too strenuously enforced. In several cases it effected a cure by itself. Its effects seem as useful in the diseases of the liver and spleen, as those of mercury in the cure of syphilis. Dr. Scott of Bombay deserves great credit for bringing it into practice. It is particularly adapted to cure the diseases of warm climates.

I used the sulphuric acid; it made a very pleasant drink, but its effects were not so powerful as those of the nitric acid; nevertheless it may be advantageously used, especially while the febrile paroxysm exists, as it quenches the thirst and allays the fever at the same time that it proves incitant: but I would object to its being used in the first attack; here it would not answer so well; but after the disease has continued some days, it will be found very grateful to the patient. I never saw it affect the salivary glands as the nitric does.

I used the muriatic acid at first, but cannot recommend it. I was soon obliged to lay it aside, on account of the great thirst it produced; I also thought it increased the febrile heat.

The acetic acid mixed with sugar and water formed a very pleasant drink, which the patients were fond of using. Nothing was more advantageous during the progress of the disease than great attention to cleanliness and pure air. Without attention to these the disease will be much more difficult to cure. With this view I found it advantageous to have the seamen washed all over with warm water as soon as they were taken sick. When the patient was convalescent, nourishing diet hastened his recovery; Port wine and Madeira were very nourishing drinks; they were prescribed in large quantities in the typhus stage of the disease. Porter did not appear to answer so well as wine: but two or three cases occurred where the patients became tired of the wine, and used the porter with

advantage but these were considerably advanced in a state of convalescence.

Sago, tapioca, panada, &c. were grateful to the convalescents. Soup, fowls, &c. they were fond of, and used them with advantage.

Sinapisms were very useful in this disease. In the typhus state they should never be dispensed with, as by acting more powerfully than blisters, they concentrated the diffused excitement in a superficial part, thereby relieving the system from some of the most troublesome symptoms. When the patient became comatose, if applied to the arms, legs and feet, they seldom failed of relieving him. When applied to the back of the neck their effects were most powerful. They succeeded in several cases where blisters would not draw. Convinced of their powerful effects, I frequently applied them to the feet, and used them alternately with blisters, to various parts of the body. They have all the virtues of blisters, and being more powerful, are to be preferred in that excessive torpor of the system that occurs in this disease, which frequently prevents blisters producing any effect before a considerable lapse of time; whereas these act almost immediately.

A Case of long Continuance of Pulsation in the Funis Umbilicalis after the Birth of the Child. Communicated to the Editor by DR. WM. DEWEES.

ON the 12th May, 1794, at 8 o'clock A. M. a lady was delivered of a female child. The child did not cry or breathe as is usual immediately after delivery, but remained motionless for three or four minutes, before any signs of respiration manifested themselves. I was surprised at this unusual

delay, as neither the circumstances of the labour, nor the appearance of the child could account for it—the labour was quick and natural; the child though not very large was apparently healthy and well formed; the pulsations of the umbilical arteries brisk; in a word every thing was as ordinary except the want of respiration: to establish this, I inflated the child's lungs, after waiting the three or four minutes just mentioned, which in part succeeded as to its object; the child after this began to inspire slowly, the expiration was protracted and attended by a peculiar creaking kind of noise—respiration was for some time carried on in a slow and irregular manner—the child sometimes breathing pretty freely for a minute or two, and then appearing to be much oppressed and in pain—respiration would now be entirely suspended from ten to thirty seconds; the child during this time would writhe its little body as if much pained, its face would become livid, and the pulsation in the funis would be much augmented; after this kind of struggle would subside, it would appear pale and lifeless as though it had fainted. In this manner did things go on until half past two o'clock in the afternoon, a period of six hours and an half—at which time the umbilical arteries ceased to beat and the child expired; the cord during the whole of this period was of course suffered to remain entire: the pulsation in the cord did not cease suddenly, as the forces of the arteries were observed gradually to diminish some minutes before they ceased to beat.

During all this period of six hours and an half, nothing untoward happened to my patient, she had neither flooding nor pain.

The state of the placenta was from time to time examined—it adhered to the inferior anterior part of the uterus—its lower edge could be felt above the pubis, and just within the mouth of the uterus.

There were no particular pains taken to prevent the funis being exposed to the air, or to maintain its warmth by any applications.

When I proceeded to deliver the placenta, I found it lying loose in the vagina, its extraction was effected without any difficulty, nor was it followed by any uncommon discharge of blood : but pains succeeded.

Upon the history of this case I beg leave to make a few remarks : first, there being no hemorrhagy in this case during the retention of the placenta proves, I think almost to demonstration, that it only happens from that part of the uterus to which the placenta is attached:—secondly, that the tonic* contraction of the uterus may for a long time be suspended without danger, if the placenta continues its connection with the uterus :—thirdly, that the uterus was in a state of torpor or in-elasticity for the whole, or the greater part of the time ; for had its tonic action taken place, the placenta would have been thrown off, or at least the circulation in it would have been destroyed ; as we find, even during some laborious labours, where both the tonic and spasmodic contractions,† after the evacuations of the waters, are powerful, that the blood passes with such difficulty through the uterus, that the circulation in the placenta is with difficulty maintained ; and is in some instances, entirely destroyed, to the destruction of the child, long before its delivery :—fourthly, that nothing could have been more fortunate than this uncommon attachment of the placenta in the case before us ; for had it been thrown off before the uterus had recovered from its state of torpor or in-elasticity (as is sometimes the case) a fatal hemorrhagy might have succeeded, for it is but by this tonic action that hemorrhagy is prevented always following the detachment of the placenta---it is on this power, that the practice of Puzos is founded, of rupturing the membranes in a certain species of flooding cases, that the uterus may contract, and shut

* By tonic action or contraction, we mean that constant and regular action whereby the uterus reduces itself to its original state after having been distended.

† By spasmodic contraction we mean, that irregular action of the uterus that is excited by stimuli, and is commonly labour, or after pains.

up the mouths of the bleeding vessels :—fifthly, her having no pains during the attachment of the placenta, shews that the spasmodic contraction is dependant on the tonic ; for were it not, we cannot conceive why it should not have taken place, since the placenta (a sufficient source of irritation) remained to stimulate the uterus for more than six hours ; and the pains which succeeded the delivery of the placenta, were, consequently, after the tonic contraction had taken place :—sixthly, there having been no particular pains taken to prevent the exposure of the funis to the air, nor any warm application to maintain its heat, shews that the death of children, in cases where the funis is prolapsed into the vagina, or is without the labia, is not owing to the influence of the air stopping the circulation in it (as some have imagined), but is in consequence of some pressure exerted on it at the margin of the pelvis or elsewhere, more especially as this must almost necessarily take place, in cases where prolapsus must readily happen, that is, in belly presentations :—seventhly, the gradual diminution that was observed, in the force of the umbilical arteries, for ten or fifteen minutes before they ceased to beat, marks, I conceive, the uterus recovering its tonic contraction ; for so soon as it began to pucker up, the circulating force, both in it and in the placenta, was diminished ; at length it contracted so much, as to entirely impede that of the placenta, and eventually throw it off. At what precise moment this happened I cannot determine, as about fifteen minutes were employed in exertions to save the child, and during which time, I did not touch ; but suppose it took place at the time the circulation in the funis stopped, or very quickly after, for as I have observed before, when I went to deliver the placenta, I found it loose in the vagina.

How much longer the child might have lived, had not its connection with the mother been destroyed, I cannot pretend to determine, but think it probable, it might have continued, as long as that circulation may have been maintained. It appeared to me to have been entirely dependant on the mother for the

support of its short life, for almost instantly after the pulsation in the funis stopped, it expired. And if we take a nearer view of the circumstances that attended this case, we shall not find the situation of the child after its delivery to be so very different as we at first sight might imagine---It was still connected to, and supported by, the mother; it was not surrounded by the liquor amnii, but this is by no means directly essential to the child, as we find many children born alive after it had been evacuated many hours, days, or even weeks, agreeably to some. The only circumstance of difference that strikes us forcibly is, its having breathed; but, even this is not sufficient to do away the possibility of its continuing to live, as long as it could be nourished by the mother, since it failed producing its most common and important effect, a change in the circulation of the blood.

Besides what has just been said, I think this case very naturally suggests the following queries. How was the circulation between mother and child maintained? Was it owing to any particular structure of the heart of the child? Was it owing to the foramen ovale remaining open unusually long, or in other words, to its having no disposition to close? Or was it owing to any mal-conformation of the lungs, preventing that free circulation through them that is so necessary to the establishment of life? Is this query rendered more probable, by the livid appearance of the face that occasionally took place? Should we not suppose, that a certain specific irritation is necessary to be excited in the lungs, either by the blood, the air, or by both, before the obliterating process (if I may be allowed the expression) can take place at the foramen ovale? and that something more is necessary to produce this, than the mere expansion of the lungs? or does it only suppose that, when this want of disposition in the foramen ovale exists, the circulation through the lungs cannot properly be established?

TO DR. JOHN REDMAN COXE.

DEAR SIR,

I FORWARD the case of a still-born child, that I promised you some time ago. I join with it some experiments made with the black oak bark, in the cure of fevers. Should you think them worthy of notice, you may give them a place in your Museum; they are neither lengthy nor flowery, but they are true and correct, and vouched by your well-wisher and friend,

J. C. ROUSSEAU.

Philadelphia, 29th July, 1805.

Case of a still-born Child restored to Life; proving, that in the most desperate Cases, proper Means ought to be used to recal such Children to Life. By J. C. ROUSSEAU, M. D.

ON the 21st of March last, I was desired to attend Mrs. O****, come to the full time of her pregnancy. Her labour began with a violent flooding, which being, by proper means, stopped, every thing progressed regularly.

The head of the child having at last engaged in the pelvis, and beginning to make its appearance at the os externum, I gave her hopes of a prompt delivery; upon which she informed me, that she had never been, in any previous labour, delivered in bed; and it was her wish to, and she immediately did, place herself kneeling down at the foot of the bed.

Her labour being quick, the child was soon born, and as I suspected from the flooding, without any sign of life. I had hardly any time to turn the child in my hands, when, without

any warning, she jumped into her bed, leaving a lifeless child in my hands, with its placenta pulled out upon the floor.

My feelings upon this embarrassing occasion may be more easily felt than described. The mother had the first right to my cares; the child's life was in the utmost danger: there was no alternative. I went to the mother, after having delivered up the child to an assistant; and, at the same time called for warm water, which fortunately was at hand. Finding no flooding, and every thing in a fair way with the mother, I returned immediately to the child.

It gave no sign of life; but finding the pulsation strong in the cord, and persuaded, as I have always been, that an organic life exists a long time after birth, between the child and placenta, even when detached from the uterus, I immersed both child and placenta in a tub of warm water, and then stooping over the child, and placing one of my hands on his back, and the other on its breast, I enclosed his nose and mouth in mine, began to inflate its lungs, and expel the air alternately by the pressure of my hands.

I continued this operation for three quarters of an hour, before the child exhibited any signs of life, stopping now and then to observe whether I could perceive any natural motion of the thorax. It was not long after, when the thorax began to move, and the child inspired once. About half a minute elapsed between the first and second inspiration. This interrupted life, if I may so call it, lasted better than a quarter of an hour, during which time I stimulated the nose and fauces of the child. The respiration becoming quicker and quicker, I began to stop gradually by pressure of my finger on the cord, the pulsation that was still very strong, and in a short time I separated the child from the placenta, and had the satisfaction to see both mother and child perfectly free from danger.

This child is now as hearty and robust as any other child of its age, appearing to have received no injury from such an uncommon entrance into life.

Can we not infer justly from this case, that unexperienced midwives, daily lose children whose lives might be spared by the same means?

I have seen a number of instances where I recalled still-born children to life, after half an hour; but with this difference, that the placenta was in utero, and I took every precaution not to injure the funis.

I cannot leave this subject without mentioning a case of preternatural labour, where, after the birth of the child, hardly any pulsation was to be felt in the cord; but it rapidly increased as soon as I began to inflate the lungs, although full half an hour elapsed before the child exhibited signs of life, and I have the satisfaction to say that this child is now robust and hearty.

On the Efficacy of the Black Oak Bark of America in all Diseases in which the Peruvian Bark has been used with Success. By J. C. ROUSSEAU, M. D.

THE high price of Peruvian bark and its scarcity induced me, some time past, to try whether it could not be replaced by some substitute. The black oak bark had been used in our Dispensary, but finding that it had not the least effect, I had desisted prescribing it.

Being, some months after, by the politeness of Mr. Benger, supplied with a parcel of the powder of the same kind of bark, prepared by himself in his manufactory, I found it so elegantly manufactured, and so much superior in fineness to any other powder used in medicine, that I resolved to make a new and complete trial of its virtues.

Upon a stricter inquiry, I found that the black oak bark, that had been given to my former patients, under the care of the

Dispensary, was so coarsely powdered, that few or none of them had taken it; and nothing could be said, either in favour of, or against it, from all my former trials.

The first patient, T. G. who fell under my care, was a journeyman printer, a drunkard. He laboured under a tertian fever, and had been trying himself some of the Peruvian bark, without effect.

I administered the black oak bark, and he took it in the dose of nearly two ounces a day, in the time of the intermission. The ensuing paroxysm was very moderate, and he missed entirely the next. Having continued the bark for a few days, he had no return of the disease.

Extremely satisfied of my success, I went in search of patients labouring under intermitting fevers. A second trial answered as completely my expectation as the first. A third, fourth, fifth and sixth, gave me not the least disappointment, and all were free from fever in three or four days, after using the bark.

I had until then given it in a very large dose, but thought of trying whether a smaller one would not be as efficacious. Numerous trials, where the bark was not taken in a dose of more than an ounce in twenty-four hours, met all with the same success.

During the lapse of time that I was engaged in my experiments, I had several opportunities of trying the same bark in a number of cases where Peruvian bark alone would have been administered, and it proved equally as beneficial as if this last had been taken.

It remained to try it in those fevers described by Alibert,* and cured so successfully by the Peruvian bark; I did in no instance whatever, fail to stop the paroxysm in two or three days at farthest.

The last case that I had the satisfaction, I can say to cure, although it is an expression that I make use of extremely rarely, was in a lady attacked with a cephalalgick fever, de-

* *Medecin de la Salpetriere à Paris.*

scribed by Alibert : her fever was intense, and the head-ache so violent, that, to repeat her own words, " she had never heard of or felt any thing equal to it. All the other symptoms taken into consideration, I determined to administer the bark, and, fully persuaded of the efficacy of the black oak bark, I resorted to it, finding that this lady's stomach could not bear the smallest dose of Peruvian bark. She took the black oak bark in the dose of a drachm, six or eight times a day ; was almost immediately relieved ; and her stomach did not reject it a single time.

It is a remark I have generally made, that the black oak bark is less nauseous, and not so apt to excite vomiting as I have found the Peruvian bark to be. I do not even recollect a single instance where the black oak bark was thrown up, at the time I administered such a large dose as that of two ounces a day.

Upon the whole, and especially from the success of my trials, I cannot but recommend the introduction of the black oak bark in our shops, warrant its efficacy, and place it on a parallel with the costly and very often adulterated Peruvian bark.

An enumeration and relation of all the cases which I cured with the black oak bark, would be too lengthy for a periodical work ; its merit must rest, until further trials, by other medical gentlemen, upon my own character and veracity.*

* The editor is happy to be able to confirm the merits of the above-mentioned remedy, from the result of several cases which have occurred to him ; and he trusts these facts will lead our practitioners to a more frequent trial of our own indigenous and valuable articles of the materia medica.

Account of the Efficacy of Sugar of Lead, in a Case of Epilepsy.
 By DR. THOMAS R. P. SPENCE, of Accomac County, Virginia.

July 23d, 1805.

SIR,

THE duty I owe society, the medical faculty in general, and Drs. Church, Wistar and Rush in particular, induces me to make this communication, being a history of my own case of epilepsy—requesting for it, if you see proper, a place in your Museum.

My first attack was in the 23d year of my age. On October 13th, 1803, as I was riding I fell from my horse, without any premonitory symptom whatever, and remained insensible (by estimation of the person with me) half an hour. The fit was succeeded with a violent pain in my head, a full, slow and hard pulse, not exceeding sixty-four strokes in a minute. Being confident it was an epileptic attack, from being hereditarily predisposed;* I immediately lost sixteen ounces of blood, and pursued an antiphlogistic course, tolerably strict, until my system was reduced pretty considerably; I then began with the cuprum ammoniacum, and continued some time; but was subject to attacks, or fulness and pain in my head, at every full and change of the moon; which leads me to believe the human system, particularly in this disease, is subject to lunar influence; for when I did not recollect the full and change, I could discover it by my feelings, particularly by a sensation of fulness and pain in my head.

I continued more or less subject to attacks of the same kind until 27th of May, 1804: I went to Philadelphia, and consulted the above mentioned medical gentlemen, who recommended me to persevere in the plan I had adopted, and to make trial of mercury, zinc, and lead. I first began with mercury, and found that it would suspend the disease, particularly the pain in the

* My eldest brother was first attacked at about the same age; another had -fancy, and died about the age of puberty.

head, for two months ; but when the system was unimpregnated with mercury, would immediately have an attack, at the next lunar period ; which induced me to keep up for seven months, a pretty considerable ptyalism, and twice a salivation. I must also observe, that I used bleeding once a month, regularly. My pulse during this time was from seventy-eight to ninety, but seldom exceeded eighty-four in a minute.

I experienced no inconveniency from the mercury, more than the sore mouth. There was a greater discharge of urine during its use : and that quite transparent, which had not been the case for three years previously.

Having considerable practice during the autumnal months, I found that riding on horseback in the sun, at this season, produced great fatigue, and operated as an exciting cause, affecting my head very much with pain. I had only four fits from the 27th May until the 6th December of the same year. All kinds of exercise producing fatigue had similar effects ; but I think gunning was most injurious. The report of a gun would affect my head and pulse. I was pleased with the amusement, and undertook it on horseback to prevent the fatigue of walking ; but the report was still injurious. I was most subject to the complaint after going to bed, during the inaction of sleep. In September 1804, I was so much reduced by the regimen and medicine, that I left off the mercury during this month, and tried the cold and shower bath ; but with considerable disadvantage. Two attacks during this month. I then continued the medicine, October and November, and had another fit after gunning, on the 6th of December.

All hopes of recovery being nearly extinguished, and life irksome, I determined to give the sugar of lead as fair a trial as I had done the mercury, and to push it to a considerable extent, let the consequence be what it might. The good effects of its use in children by Dr. Rush, gave some encouragement ; while the insignificance attending its use in adults, mingled rather more fears than hopes. In several cases in which the Doctor used it, not one case was cured ; and only one was suf-

pended a few weeks. I therefore, with reluctance, began and took of sacch. saturni one-fourth of a grain three times a day, and increased the dose in one week to one grain; and continued with that for the space of two weeks, and then increased it to eight grains twice a day; and continued taking it in this quantity three or four weeks, with, I may say, happy effects; not one symptom of my former complaint all this time; my pulse from seventy-eight to eighty-four in a minute.

The sensible effect of the lead for the first two weeks, was only a little costiveness; afterwards, a sponginess of the gums came on, with a dark livid appearance around the dentes incisores; small flow of saliva; foetid breath; although my teeth were loose, my mouth was not sore; a very great increase of urine more than when I took mercury; costiveness, sometimes for two days, and then the faeces quite black and compact; my upper extremities, particularly my elbows, affected with pain in the morning.

Although apprehensive of serious consequences I still determined to go on with the medicine, and lose some blood to assist it; accordingly, on the evening of the 24th January I lost sixteen ounces; my arm bleeding accidentally the next morning, I lost, by estimation, eleven ounces more. I now for the first time, lost all appetite for food, and continued three or four days without eating any thing; this was succeeded by pain in the epigastrium, extending down below the navel, in the spine, and region of the liver, which continued ten days, very excruciating indeed; I took laxatives, opiates, in large and repeated doses, together with a long catalogue of medicines without any relief for the time above specified.

The pains continued very obstinate, but less severe, about six weeks; those in my arms were not gone, and extending to my legs, rendered standing impracticable. During the continuance of these pains I was bled five times; the blood after standing twelve hours had very little or no serum; and the crassamentum was of a dark, livid appearance.

After trying almost every medicine that imagination could suggest, and being in a state of slow convalescency, I found the greatest effectual relief from chalybs ppt. and myrrh; this first restored my appetite.* Since recovering my health, my stomach appears to be so much contracted, that I cannot eat more than two-thirds or half as much as I could, or was wont to eat before, without a sensation of considerable fullness. During the artificial disease from lead, my pulse did not exceed sixty or sixty-four strokes in a minute; and since, from seventy-eight to eighty-four is its natural standard.

It has now been seven months since I began with the internal use of the sugar of lead; since which time I have not had the least sign of my former epileptic complaint; except once, after fatigue in the hot sun, I had considerable pain in my head.

I was bled every month during the time I used mercury, without any sensible relief from it; and am led to believe it an injurious plan to pursue in this complaint, from the following consideration. Hemorrhage, or blood-letting to excess, will produce plethora, and I believe where that is used in a healthy state of the system, as in epilepsy where there is no *general* morbid excitement, it must do harm by occasioning a predisposition. Moreover, if it has any good effect, that good effect is lost by not attending particularly to the operation at a particular period of the moon; which,

* I was very sanguine in my expectations from opium on hearing my friend Dr. I. Stevenson say, "That he attended the case of two children, one seven, the other nine years old, who eat a quantity of white lead for chalk; they both had very severe pains in the abdomen, occurring at intervals; their skins were remarkably yellow; their bowels were nearly natural or rather costive; laxatives produced very black stools, but no alleviation of pain; opium was so good a palliative that he had recourse to nothing else; it seemed plainly indicated, neither of their pulses beat oftener than thirty-six, and very soft; opium rendered the intervals of ease longer and longer, until the pains vanished altogether in about five or six days."

when neglected, renders the attacks more frequent and more violent.

Queries.—Whether or not has my taking the sugar of lead so soon after a course of mercury, produced those happy effects of relief, which were not obtained in adults by the use of the same medicine?

Whether or not have the good effects of the medicine proceeded from its direct sedative operation; or from its contracting the stomach, and by that means obviating plethora?

What is the *modus operandi* of saccharum saturni taken internally? Is it a sedative or a stimulant?

Perhaps the pen of some speculative theorist might be advantageously employed in answering these queries. I am content with having experienced the beneficial effects of the medicine, and giving a narrative of facts and circumstances which led me to it.

These facts I have thrown together without much regard to order, or systematic arrangement; they are related with all the fidelity my memory will admit of; I wish I could have avoided reasoning on them; but as a celebrated author observes—“As thorny as the subject appears we must approach and handle it;” perhaps they may serve as one round in the ladder, by which we may finally climb to the summit of medical science.

THOMAS R. P. SPENCE.

DR. JOHN REDMAN COXE.

On the Generation of the Septic Acid, from Neglect of Cleanliness.

By DR. JOHN BRICKELL.

Savannah, June 15th, 1805.

SIR,

I HAVE been waiting for time and circumstance to furnish something new and interesting, when I should reply to the letter with which you were pleased to honour me some time ago.

I recollect that previous to my attending the hospitals in my youth, the Essay of Mr. Percival Pott, of London, was published, relative to some instances of mortification of the toes, which he found extremely difficult to cure.

Cinchona, he states, did no good, the excruciating pains induced him to give opium, and he washed the parts with milk. After long suffering, some of his patients died, some recovered.

Two or three patients with mortified toes were received in the hospital at different times; which, on being reported to, and examined by, the physicians and surgeons, they directed to be treated according to Mr. Pott's method. In pursuing this plan, I had their sores often washed with mild soap suds. They all got well much sooner than we expected.

Some time ago a person came to me for advice for his toes, which had begun to mortify. On examination, it was evident that he had not washed between his toes for a long time. Recollecting some important discoveries of Dr. S. L. Mitchill, of New York, I put some slips of litmus and other test papers, between the toes of each foot. The litmus paper soon became red, which, together with the smell, satisfied me, that the long continued contact of the local fordes, united with the local discharge, had, by generating the septic acid, begun the process of mortification.

I had, between the toes of one foot washed with lime water; and a weak solution of carbonated potash applied as often be-

tween the toes of the other. The man got well very soon : those washed by the lime water were soonest well, which may be attributed to the antiseptic quality of the lime united with its astringent effects.

Here then is the solution of the problem, of the patients under my care in the hospital, getting well sooner than expected ; *the alkali of the soap wash*, which entirely escaped us at the time.

Some healthy persons are subject to stinking breath. This mostly arises from the contents between the teeth rotting for want of cleanliness : let these contents be removed, the parts be washed with water very slightly warmed, daily, and then well washed with lime water, the breath will be sweet, and the cause of rotting the teeth will be removed.

In the pyrosis sputatoria, I examined the fluid vomited up ; it proved to be strongly alkaline ; acid of any kind cures it. The perspiration however ought to be examined, and if stopped ought to be restored ; for spasm on the surface is apt to produce vomiting, which may, by inverting the peristaltic motion, draw into the stomach the bile poured into the duodenum. It is indeed to be remarked that sometimes an acid, sometimes an alkali, prevails in the stomach, which are easily detected, in the contents vomited, by chemical tests, and cured by their opposites.

I am, Dear Sir,

Yours, with great respect.

JOHN BRICKELL.

DR. JOHN REDMAN COXE.

P. S. Last summer a friend of mine sent me a brace of plovers, in the afternoon ; I ordered them cleaned and kept for next day's dinner. When the time came for cooking them they smelt offensively : I directed the cook to wash them well in ley, and broil them ; when brought to table they had not the least offensive smell, and were extremely delicious.

An Account of the Virtues of some American Trees, Shrubs, and Plants. By JAMES MEASE, M. D.

Philadelphia, August 15, 1805.

DEAR SIR,

I SEND for publication, a short account of the medicinal qualities of certain American trees, shrubs, and plants, which deserve much more attention from our brethren, than they appear hitherto to have experienced. The effects which I have stated to be produced by them, have either been never publicly stated before, or so slightly noticed, as not to make any general impression: however, their importance should induce medical gentlemen in the country, to attend to their cultivation, and I hope they will omit no opportunity of adding to the respectable list which we have already obtained of American remedies, as an immense saving would thereby be caused not only to themselves, but to the country in general; whence we now export many thousand dollars annually for remedies, which with few exceptions might be safely dispensed with.

With the sincerest wishes for the success of your work,

I remain,

Affectionately Yours,

JAMES MEASE.

DR. JOHN REDMAN COXE.

1. *Ulmus Americana* of Marshall, American rough-leaved elm tree. Red elm.

From the great importance of this tree, I am induced to transcribe Marshall's description of it.

"This tree rises to the height of about thirty feet, with a pretty strong trunk; dividing into many branches, covered with a lightish-coloured rough bark. The leaves are oblong, oval and sharp-pointed, somewhat unequally sawed on their edges, unequal at the base, very rough on their upper sur-

face, and hairy underneath. The flowers are produced thick upon the branches, upon short, collected footstalks; and are succeeded by oval, compressed, membranaceous seed vessels, with entire margins, containing each, one oval compressed seed." *Arbustum Americanum, Philadelphia, 1785. Cruckshank.*

The virtues of this tree, were first publicly noticed by Dr. Samuel L. Mitchell, in the year 1789: He observes, "That the inner bark, by infusion, or gentle boiling in water, affords a great quantity of insipid mucous substance, that may be employed with safety as food; I have eaten it repeatedly, and found it to agree with me perfectly well, and when mixed with sugar or with lemon juice, it became very palatable. The knowledge of this fact may be very serviceable to such travellers, in the unsettled parts of our country, as lose their way, or fall short of provisions. It has been beneficially administered in catarrhs, pleurisies, quinsies, and applied as a poultice to tumours, and as a liniment to chaps and festers." *Carey's American Museum, Vol. VII. 1790.*

The following additional facts upon this tree which were communicated by Dr. Joseph Strong of Philadelphia, have already been inserted by me in the *Domestic Encyclopedia, (Art. Elm)* but may be with great propriety introduced in this place, on account of the important information they furnish.

Dr. Strong states, that during the time he served as surgeon in the army on our western frontiers, he experienced the most happy effects from the application of poultices of the red elm bark, to gun-shot wounds, which were soon brought to a good suppuration, and to a disposition to heal. It was applied as the first remedy. When a tendency to mortification appeared, the bark bruised and boiled in water, produced the most surprising good effects. After repeated comparative experiments with the other common emollient applications, as poultices of milk and bread, and linseed, its superiority was firmly established. He particularly stated to me the cases of the wounded in the action, in which the late general Wayne de-

feated the Indians, in August 1794, as proving, in the most evident manner, the beneficial effects of the poultice. In old ill-conditioned ulcers, and in fresh burns, equal benefit was derived from it. In diarrhœas and dysenteries, an infusion of the bark was used with advantage as a diet drink. A soldier who lost his way in the woods, supported himself for ten days, upon the mucilage of the elm, and on sassafras twigs. From the above facts, the red elm tree may be considered as a highly valuable addition to our stock of medicines, exclusively American, and ought to be carefully searched for by all medical gentlemen in the country, and its virtues proclaimed, in order that the farmers upon whose plantations it may be found, may preserve it from the indiscriminating axe.

2. *Sesamum Orientale*, or *Vangloe*, of the West Indies, *Bene*, or *Binny*, of the Carolinas, and Georgia.

This plant has been known for a long time in Africa, where the seeds were employed as horse food, and for culinary purposes. Sonini and Brown, mention the use of the seeds, for the above purposes at the present day in Egypt, and in the Carolinas and in Georgia, they are constantly boiled by the negroes with their allowance of mayz, by which it is rendered more savoury. The seeds abound in oil of a very fine quality, fully equal to that of Florence, according to Mr. Morel of Savannah. See his paper in the Amer. Phil. Soc. Trans. Vol. I.

We are indebted to the public-spirited James Simons, Esq. of Charleston, S. C. for a knowledge of the virtues of the leaf of *Sesamum*, in the dysentery, a disease which unfortunately too frequently commits great ravages in our country settlements. During the summer and autumn of the year 1803, it prevailed to a great degree in the state of South Carolina; and from several statements in the Charleston papers, it appears, that a watry infusion of the leaf was attended with the most remarkably good effects in the complaint. It is also stated, that the leaves retain their virtues in a dried state. As from my experience, the plant comes to perfection in Pennsylvania,

it would be well to cultivate it; and in order to give an opportunity of so doing, I have placed seed procured from Georgia, in the hands of B. M'Mahon, seeds and nursery man, Chestnut street, who has undertaken to deliver it to applicants. I hope that those who may make future trials of the plant in the dysentery, will furnish your useful work with the result.

3. *Prinos Verticillata*, Virginia winter berry of Marshall & black alder. The utility of the bark of this shrub when joined with that of *cornus florida*, or common dogwood, in intermittent fevers, is very generally known to the people inhabiting the sickly parts of the states of Pennsylvania, New Jersey and Delaware; but the knowledge of its efficacy in mortifications, when united to the root of *sassafras*, is much more confined. I have received however, such an account of the success of the combination, in the above complaint, from Joseph Cooper, Esq. of New Jersey, that I am induced to recommend in the most urgent manner the use of it. A decoction of the bark is to be mixed with a little spirits, and when mixed with flour is to be applied to the parts. The decoction is also to be taken freely. Mr. Cooper related to me several instances of the efficacy of this treatment in apparently desperate cases of mortifications, even after the Peruvian bark had failed in checking the progress of the disease, which have determined me to add it to my materia medica.

4. *Sanguinaria Canadensis*, or blood-root, red root, is a very common plant in our woods. An inaugural experimental dissertation on it was written by Dr. Downey, of the University of Pennsylvania, in the spring of 1803. Among the virtues ascribed to it in that dissertation, one is unnoticed, which probably renders this plant of more value than any of its other virtues. I allude to its efficacy in removing jaundice. Shoepf barely mentions its use in that complaint; (p. 86.) but my authority for its utility therein, is Thomas Cooper, Esq. of Northumberland, who in a letter which I lately received from him, mentions, that Dr. Smith of Wilkesbarre, in Luzerne county, has for some years past used the powdered root, with

great success in doses of 15 or 20 grains; and further observes that it is a chief ingredient in the quack medicine, known by the name of *Rousson's bitters*, which are in great repute among the illiterate.

Dr. Muhlenberg of Lancaster, informed me, that in the case of a young woman, who swallowed the seeds of *sanguinaria*, a temporary alienation of mind was produced.

5. *Asclepias Decumbens*, or *Pleurisy root*. Among the properties which this vegetable possesses, that of being a diuretic has never yet been publickly noticed. I have not used this plant myself, but my friend Mr. James P. Willson, of Lewes, Delaware, has assured me that it is both safe and powerful, and has been frequently used with benefit in that part of the country.

Collinsonia. Horse-weed, knot-root, knot-weed. The hard knotty root of this plant, when infused in cyder, has acquired much credit in dropsy, and in the case of an old lady, a cure was evidently effected by the remedy thus exhibited.

6. *Aralia Spinosa*. Commonly called, prickly ash, angelica tree, tooth-ach tree.

A watery infusion of the inner bark and root of this tree has a powerful effect in removing the pains of chronic rheumatism. It is possessed of a considerable degree of acrimony, and powerfully affects the salivary glands. A moderately weak infusion, excites perspiration and does not nauseate: but a strong dose seldom fails to produce that effect. I have had the most decided proofs of the efficacy of this remedy in rheumatic affections, and therefore can safely recommend it. Some persons infuse the bark in spirits; but this practice I do not approve of, being well convinced long since, that where water can extract the active principle of a vegetable, a spirituous tincture ought never to be resorted to for internal purposes. A strong tincture, however, of the berries is successfully applied to hollow teeth when aching.

7. *Aralia Nudicaulis*. The roots of this species of *aralia*, may be substituted for sarsaparilla, and doubtless used with

more success than that expensive medicine, of whose virtues I have no opinion: indeed I cannot help wondering at the folly of medical men in continuing to prescribe it, after the experience which they must all have had of its inertness. A watery infusion of *aralia nudicaulis* is taken in some parts of this country, as a remedy for that species of erysipelas usually termed shingles: it is also sometimes used by the farmers as a tonic, in cases of a relaxed stomach and loss of appetite.

8. *Arum Triphyllum*. Indian turnip. The acrimony which the fresh root of this common vegetable of our country possesses, is well known. It would be well for those who are remote from medical aid, if the knowledge of its virtues was equally well diffused. I have known it singularly beneficial in the asthma, particularly in old people, and in the croup, and hooping cough. The following form of its exhibition answers best.

Grate one dried root, and boil it in half a pint of milk. The rule for its exhibition, in a general way, is to give it of such a strength, as that some acrimony will be perceptible to the tongue and throat. It never affects the general circulation, but acts solely on the parts just named; to the glands of which it is a powerful stimulant, causing a copious secretion of mucus.

9. *Chenopodium Anthelminticum*. Wormseed. I should not have mentioned this well known plant, were it not for the purpose of informing your readers, that an essential oil is extracted from the seeds of it, which is equally, if not more powerfully destructive to worms than the seed. The dose being so much smaller than that of the seeds, renders the oil highly valuable. The worms are killed by the oil and are discharged without form. The preparation may be obtained at Baltimore.

10. *Geranium Maculatum*. This valuable plant is called in New Jersey, and in some parts of Pennsylvania, by the name *crow-foot*; but as there are other plants which bear the same trivial name, I will here describe the species of *geranium* I

am now considering. In England the common name of the genus *geranium*, is *cranes-bill*, and under that title, Dr. Willich treats of it in the Domestic Encyclopædia. Martyn enumerates 32 species of *geranium*.

Geranium maculatum. Root perennial, stems several, about a foot high or more, dividing by pairs; from the middle of the divisions come out the peduncles, which are pretty long and naked, each sustaining two pale purple flowers, with entire petals. Leaves five-parted, gashed, the uppermost growing immediately to the stem, without any foot-stalk, (sessile); flowers in May.

This excellent vegetable is happily very common near Philadelphia; it abounds also about Woodbury, New Jersey, and should be transplanted into every garden. The powerful effects produced by a decoction of the root in milk, in bowel complaints, particularly of children, are well known; but its efficacy in stopping bleedings is known but to few. I have, however, been so well informed of two cases, in which the most obvious advantages were derived from the application of the root to the bleeding orifice, that I think proper to mention them, and to urge the trial of the remedy to all who may be so unfortunate as to require its use.

The first case was related to me by the excellent Mr. *William Bartram*, who stopped a most profuse hemorrhage in the ankle, from a wound by an adze. From the pulsatory manner in which the blood flowed from the wound, there could be no doubt of the division of an artery.

The second case was stated to me by Mr. Paul Cooper, of Woodbury, New Jersey. The particulars I do not at this time recollect, except, that the hæmorrhage was very obstinate, and resisted a variety of powerful astringents which were applied by the physicians of New Jersey, and of this city. I will procure a statement of the case, and send it to you.

*Account of the Dissection of a singular Lusus Naturæ. By Dr.
J. B. DAVIDGE.*

Baltimore, August 6th, 1805.

SIR,

THE enclosed is a copy of a letter written to Dr. McKenzic of this city, in 1803. If you think it entitled to a place in your Medical Museum, a periodical work of considerable merit, you have my permission to insert it.

Accept the homage of my esteem,

JOHN B. DAVIDGE.

DR. COXE.

Baltimore, March 10th, 1803.

DEAR SIR,

AGREEABLY to my promise, I send to you a correct detail of the phenomena, as they appeared externally, and were discovered upon dissection, in that singular *lusus naturæ* of the human kind, your friendly courtesy furnished me with; and I solicit you to accept for the favour you granted to me, of using the preparation in my lectures, that return which a mind conscious of an obligation naturally offers.

On the first view, the external sexual parts have all the characters of those of man. The apparent penis emerges from the usual part of the pubes. In size and length it fully measures with the penis of a youth of fourteen, the age of your patient. Its glans and præputium are perfect and natural, to a youth at this period of life; but upon examining I can find no urethra or perforation at its apex; a pit or slight excavation is all that is discoverable.

About half way down this fictitious penis, or real, though preternatural clitoris, there is, posteriorly, an attempt at an urethra; but having penetrated about three-fourths of an inch, it ends in a kind of cul de sac, or blind duct. It receives with ease the smaller end of a blow-pipe.

Leaving this doubtful member, we are led to examine the two fleshy embossments, which, forming the labia pudendi of the moderns, or *alæ majores* of the ancients, pass from before backwards; but nature, to astonish us the more, has departed more widely from her ordinary route in this step, than in forming a clitoris of three inches in length. Instead of labia pudendi, we have presented to us a scrotum, complete in its structure and figure, if we except a slit, of about an inch and an half from its anterior to its posterior commissure, running from the inferior part of the fictitious penis posteriorly, and constituting the *rima cunni* of Albinus. So confounded with, and obscured by the common and numerous rugæ of the scrotum, is this slit, that it is not discovered otherwise than by mechanically separating the two lateral portions of this rugose bag. From the posterior commissure, or angle of the *rima*, a raphe, analogous to that of man is continued to the anus. About three-fourths of an inch, tracing from the anus anteriorly along the course of the seam of the perinæum, is an awkward endeavour, in appearance, to effect a perforation; but it can remain as an index only, not being permeable to the smallest bristle, that nature had not wholly lost sight of her general laws, but chose in the present instance to play with their powers, and free herself a little from the dull formality of unity.

The left lateral division of the scrotum, has all the appearance it would have in a youth, who might force up to the abdominal ring, the testicle, and leave the bag pendulous. It is otherwise with the right. This contains a body similar to a testicle, without its epididymis, and sufficiently mature for the age of fourteen. The dartos muscle is natural, and evidently capable of alternate, free relaxation and contraction. The testicle, or misplaced and very much enlarged ovary, has its proper tunica vaginalis, and is appended to a cord, in no external character dissimilar from the spermatic. At the inferior end of which cord there are three distinct fimbriæ. But as above hinted, there is no epididymis; the cord ascends, and passing through the abdominal ring, is soon lost in the *ligamentum rotundum* of the right side, to be described hereafter.

The nymphæ, shielding the entrance into the vagina, are in a great degree natural, though rather starved, as they should protrude themselves at the age of your patient, a little beyond the labia pudendi, or what, in strict justice, we may call the lateral portions of a perfect scrotum. For by some strange caprice of nature, the labia pudendi have been forced to yield, in our subject, their rights, to the overbearing insolence of scrotal claims.

A little subsequent to the death of the person from whom our preparation is taken, you inform me that the vagina admitted the finger with facility: it now admits of the introduction of a large blow-pipe.

The os pubis is much larger on the right side, than on the left. The mons veneris is natural and well clothed with hair.

The characteristics of the parts, internally, decidedly announce in behalf of the female. The uterus or matrix is natural. The ligamentum latum, tuba fallopiana, fimbria and ovarium of the left side are not deformed with any thing preternatural; and the broad ligament with its fallopian tube are perfect on the right side; but here there is neither ovary nor fringe.

At the exterior edge of the right broad ligament there is a long narrow sac; the walls of which are of extraordinary thickness, and in their texture approach to callus. It will receive about two drachms of water, and terminates in the vagina, in the form of a meatus urinarius. This sac is unquestionably the urinary reservoir, or bladder.

The ligamentum rotundum of the left side, rises naturally, from the body of the uterus, and passing out through the abdominal ring of its own side, loses itself in the external parts.

The round ligament of the right side begins in that part of its corresponding broad ligament, where the right ovary should have been, and after passing on a small distance, suddenly expands to the size of the spermatic cord of the male, becoming what I have already delineated the cord, to which the testis

ticle, or preternaturally enlarged, and preternaturally collocated ovary is attached.

The right ovary or testicle (let judges determine) equals the left, which is of common dimensions, six times multiplied.

The above uncommon, and I may add, unparalleled phenomena, for so far as the faithful light of natural and medical history enables us to advance, we explore in vain the archives of nature and medicine for a parallel, I demonstrated to the gentlemen, among whom I have the honour of allotting to yourself a place, who attended my course of lectures this season.

I have endeavoured to be faithful and honest, keeping the path intermediate to the hypothesis that nature is not uniform in her economy, and that, which admits of no fundamental variety. I have related facts as they are, without straining any one part of the general character to favour this or that naturalist.

It would be highly gratifying to the curiosity of the philosophic naturalist to obtain some history of the amatorial appetencies, as they were displayed during life, predominant in your patient; but as the incidents necessary to such private history are enveloped in shade impervious to the ray of inquiry; and as any particular furnished by strangers, would serve more to direct the pencil in the general outline of character, than to open a way to the individual springs of the passions, we must be content with interpreting the expression of the leading features of this wild game of nature.

It may justly be questioned whether the person we treat of, be of the hermaphroditical order, and establish one affirmative, against the many negatives of naturalists, in behalf of a human hermaphrodite, as the possession of all the sexual properties of the male and female, will perhaps be urged as necessary to constitute a genuine hermaphrodite.—It is a serious misfortune, that in America we have it not sufficiently in our power to speak to the world, in the universal language of engraving.

If you will excuse me, I will add what some writers have said and written on this subject.

In Cheselden's thirty-third plate we have a representation of "the parts of an hermaphrodite negro, which was neither sex perfect, but a wonderful mixture of both. This person was twenty-six years of age, and in shape perfectly male."

As it is not unfrequently difficult for us to determine the sex from the general external form, which is I suppose what is meant by being "in shape perfectly male," without taking into the account the external sexual parts, I think that this first step needs farther interpretation.

Figure 3 refers to "labia or a divided scrotum, in which were perfect testicles with all the vessels."

Whether Cheselden intended that we should understand from these words, that each testicle had its proper epididymis and vas deferens, I am unable to conclude; nor is the difficulty I meet with here, in any degree lessened by the circumstance of our preparation; where there is, from every external character of the body itself, contained in the right scrotal sac, every evidence of its being a genuine male testicle; but how is this evidence affected by the absence of the epididymis, and presence of fimbriæ within the tunica vaginalis? To which we might add the fact that there is no ovarium on the right side.

Cheselden has given us no account of the internal parts; he has not said whether there were a uterus and its appendages, the ovaria and fallopian tubes. He makes no mention of the urethra, and we are left to guess whether it terminated in the vulva, or passed down through the clitoris. Upon the whole, we have not sufficient authority to believe those bodies, by this learned anatomist denominated testicles, to be of the same nature and structure, although they be of the same size, of the male testicles; nor have we a right to use the language of this gentleman and give to the subjects of his plates, a place among the hermaphrodites of nature; as it may be fairly argued, according to a hint above, that a real hermaphrodite must possess every sexual part of the male and female.

Plate xxxiv of Cheselden is pretty much in character with his thirty-third.

Plato was of opinion that mankind, with all other animals, were, originally, during the infancy of the world, hermaphrodites, and in process of time were separated into male and female. For this I have the authority of Darwin's *Zoonomia*.

“ La portion du clitoris qui est apparente a peu de longueur, et de volume, si ce n'est dans quelques femmes, où elle égale le bout du petit doigt, le pouce, et même la verge de l'homme.”
Baudelocque, tom i. page 93.

“ Hermaphroditi veri non dantur.” *Rusch. Thes.*

“ Que extra venerem in casta foemina, parva fuerat, suo etiam modo arrigit et intumescit ut preposteræ veneri servire possit multoque usu ejus denique moles ejus augitur.”

Haller. Physiol.

In Bruce's Travels, and in Travels in Africa, Egypt, and Syria by G. W. Browne, we are told that “ the clitoris is always extirpated as a religious ceremony.” This ceremony was suggested by its size I suppose. Those who have a sufficient facility of faith may accord credit to Bruce's travels.

Yours, with esteem,

JOHN B. DAVIDGE.

DR. MCKENZIE.

An Account of the Diseases of Queen Anne's County, Eastern Shore of Maryland, during 1802—3. By DR. G. WILLIAMSON, in a Letter to the Editor, dated Baltimore, June 12th, 1805.

SIR,

THE history of a country so notorious for autumnal diseases, as that of the Eastern Shore of Maryland, would no doubt be gratifying to the reader, who is unacquainted therewith; but as I do not feel myself adequate to an undertaking of such magnitude, it must suffice to say, that that part of the country in which I resided, is low and interspersed with branches, ponds, and swamps, contiguous to some of which there are considerable marshes; there is also a mill pond in the neighbourhood. The upland is a light sandy soil, and very famous for the production of wheat and Indian corn.

As it has long since been known that the neighbouring atmosphere, in countries situated like this, is, during the autumnal months, much contaminated by the disengaged miasma; and that this atmosphere is one of the grand causes of autumnal diseases, I shall not deem it necessary to make any comments thereon.

The cholera infantum, a disease so prevalent in cities, and one so much dreaded by parents, was not very prevalent here; the most of those cases that did occur were easily cured by calomel purgatives, absorbents, &c.

The only case I shall notice of this disease, was that of a child aged about seven months: this child had been labouring under the disease six or eight weeks before I saw it, although I had been spoken to by his father on the occasion some time previous to this; but not then having commenced practice, he was referred to the family physician; the disease still progressing, and the child consequently getting much weaker, a consulting physician was applied to, at which time I was not in

the neighbourhood. Soon after my return, the parents on getting up one morning, observed the child much worse; and in addition to the disease he had long laboured under, they discovered an external affection that much alarmed them, which extended from the umbilical region down to his knees, and which they supposed to be a mortification. A number of the neighbours according to a country custom, were summoned to see the child pay the last debt due to nature. As I was at hand, and the other physicians were not, some of the attendants proposed my being called in; the father consented with observing it was not worth while, as it was too late for any relief to be administered: this prediction I at first thought correct; but as I had been induced from experience to adopt the maxim of "while there is life, there is hope," I prescribed according to the best of my judgment, and am happy to say, that however simple my prescriptions may appear, they had, I believe, the good effect of curing the child, as none others were had recourse to: for the external appearance which I supposed to be an incipient gangrene, cataplasms of bitter herbs, and Peruvian bark were applied, and frequently renewed. Internally, I gave a weak solution of sal tart.—laudan.—et ol. anis. to quiet his bowels which were then much disordered; the tinct. cort. Peruv. was also given in small quantities.

Convulsions in children, and cholera morbus in grown persons, frequently occurred during the sickly seasons of 1802—3, but as nothing peculiar was observable in them or the treatment thereof, I shall proceed to the more formidable diseases, the intermittent and bilious fevers: this part of the country has ever since my memory, been remarked for being propitious to the intermittent fever, but within these few years past they have been more than usually of a bilious nature. The ague and fever of this country like those of most others, are not confined to any particular type, although that of the tertian is most frequent. When first called to a patient labouring under this disease, I generally commenced the treatment with a purgative composed of calomel and jalap; two intentions were had in

view in conjoining the jalap; one was to make the cathartic more active in its operations, the other must be obvious to every physician who may have practised in a country where the citizens are opposed to the use of calomel. I would here beg leave to observe that it never was my wish to give a purge that would operate frequent, but quick; after the *primæ viæ* were cleansed, barks were given in as large quantities and as frequently repeated as would agree with the stomach of my patient; I found a little Virginia snake root, and salt of tartar conjoined with the bark, answer much better than it alone. Emetics are a favourite remedy with many of those who are subject to the ague and fever, and if they are not indulged with them, they think the physician not master of his profession; owing to this circumstance, I indulged them where I did not think them really pernicious, although I generally prefer cathartics, and believe they answer every purpose; in fact I never prescribe an emetic in any disease unless I think it indispensably necessary, which, by the by, I think much less frequently the case than is generally imagined. In this part of the country liver complaints are frequent and sometimes troublesome, and in my humble opinion there is no remedy we could have access to, so valuable in these complaints as calomel; hence it was that I prescribed it in most diseases where purgatives were necessary, and I was convinced there was nothing to forbid it.

The next disease I proposed treating of, is the bilious fever, and I must here also beg leave to observe that it as frequently partook of the intermittent type, as the intermittent did of the bilious. Yet it sometimes, and not unfrequently, was of the complete remittent type. This disease when properly treated was almost always very manageable; when improperly treated in the first stage by too great depletion, it occasionally degenerated into the typhus fever, frequently proved troublesome, and sometimes fatal. I believe with the illustrious Rush, that debility is the predisposing, and stimuli the exciting cause of this disease: this doctrine if not correct, is in my opinion the most plausible that has yet been advanced; for how evident

must it be that a system previously debilitated, will, by an over-portion of stimuli acting on it, be thrown into a morbid action, which is what that celebrated author terms the proximate cause of fever. In the treatment of the bilious fever of this part of the country, I have seldom found it necessary to unsheath the lancet. When first called to a patient labouring under this disease, if his stomach was much disordered, the saline mixture was had recourse to; after his stomach was somewhat quieted, a cathartic composed of calomel and jalap, was given; if a remission did not then take place, a febrifuge mixture of sal. tart. crem. tart. & tart. antimon. was given in some agreeable drink, and as soon as a remission took place, the bark was given; if my patient's stomach would not bear it in substance, I gave it in decoction; when the case would admit of it, lavender compound was added to the decoction of bark with advantage; when I met with a patient who could not take the bark, columbo was had access to.

The two following cases were the most remarkable of the bilious fever that occurred during my practice in Queen-Anne's.

The first was what I conceived to be the highest grade of bilious fever, or that disease frequently termed yellow fever: the subject was a boy aged ten years: preceding this attack he had been indisposed, and taken some medicine prescribed by his old grand-father, who was extravagantly fond of him. The old gentleman is one of those men, who are much opposed to physicians, and it is a very rare occurrence for one to be employed in his family; however, after his grandson had been ill for about thirty-six hours I was called in. When I first saw him he had a high fever, hot skin, pulse quick, and frequent, violent pain in his head, flushed countenance, oppression at the præcordia, pain in his stomach and bowels: a cathartic was prescribed, and he was directed to take the febrifuge mixture as soon as the purge was done operating, neither of which had any effect, which I supposed was owing to his grand-father indulging him with cold water, new cyder, or any thing he

might please to call for: the second day worse, high fever, pulse much as yesterday, pain in his head and bowels increased; delirious, bleeding from the nose, fauces, &c. skin and eyes much yellower than usual, a puking and purging of black grumous matter, not much unlike coffee grounds; when moved he screamed violently, there is a certain degree of wildness in his eyes, and he is almost continually picking the bed clothes. A blister was applied to the back of the neck, and alkaline injections were directed; these however were not tried. The following morning death closed the scene. As my patient was of a delicate constitution, and considerably debilitated by a previous indisposition, I did not think proper to let blood in his case.

The next case was what I termed an intermittent bilious fever; the subject of which was a young gentleman of a robust constitution, although he had somewhat impaired the tone of his stomach by a foolish practice of puking up the contents thereof when in health, merely to gratify the curiosity of his acquaintance. It is not a little remarkable that several children of the same parents possess that command over their stomach, and what is more remarkable is, that it is not owing to their figuring to themselves any uncomely scene, or making any great exertion, as a small effort, from a desire to please themselves, or gratify the curiosity of their acquaintance, is sufficient to produce the wished for phenomenon.

When this young gentleman was first attacked, he was much alarmed, as he had an obstinate puking; and having a few weeks prior to this lost a sister by a similar complaint, he now regretted having habituated himself to a practice so foolish in itself, and one so baneful in its consequence: in addition to the puking he had a high fever with violent pains in the head, back, &c. he had, also, a purging: the saline mixture was first directed to quiet the stomach, after which a purge of calomel and jalap was given, and he was directed to take the bark as soon as the symptoms would admit of it; on the third day the disease returned with greater violence than ever. I was sent

for in haste, but living several miles distant, the symptoms had abated before I arrived: his vomiting had been so severe that he said he thought it must have killed him; the saline mixture and other medicines had been had recourse to, but availed nothing; I directed a continuation of the barks as soon as an intermission might take place: he was now very solicitous for something to relieve his vomiting, as that was, in his opinion, the most alarming symptom he laboured under, and he dreaded the consequence of another attack: after a little reflection, I resolved to give the following mixture, sal. tart. tinct. op. es. menth. & aq. font. in small quantities, which had the wished for effect, and my patient was soon cured by taking plentifully of bark. I confess, I at first had my doubts respecting the propriety of giving tinct. opii in this stage of the disease, but these doubts were soon removed when I considered that opium was recommended, by the most celebrated authors in the hot stage of intermitting fevers, and also, that in many violent diseases of the stomach, it has the good property of allaying its irritation and quieting it.

In the autumn of 1803, the weather was very dry and warm. Dysenteries were this season prevalent but mostly mild, and generally cured by cathartics, glysters, an alterative pill composed of calomel and ipecacuanha, with strict attention to diet and drink. I did not in a single case find it necessary to have access to emetics or opium, previous to a cathartic. When first called in, I gave a purge of jalap and calomel. I believe with Ontyd, that calomel in this disease not only cleanses the primæ viæ, but it seems to have somewhat of an anti-dysenteric power, for it may be exhibited, even to the most delicate constitutions with perfect safety, and frequently under its use, the gripings and pain abate; after the bowels were evacuated, I had access to the alterative pills, one of which was given three times in twenty-four hours, and the bowels were kept open by means of the ol. ricini. Ontyd when speaking of oleaginous medicines, says, that "they are not only useless but even hurtful, for they often adhere to the intestinal plicatures, contract rancidity, and excite grievous

pains." I must here beg leave to differ in opinion from that author, for so far from considering ol. ricini injurious in this disease, I consider it among the best of remedies that can be employed, insomuch that I believe it has not only the effect of evacuating the contents of the bowels, but has also, the effect of obtunding the acrimony of the offending matter, and healing the internal coat of the injured intestines. The two most obstinate cases of this disease which occurred in my practice were those of married ladies, each of which brought on a relapse when nearly cured, one by drinking cold water, the other by indulging herself with a little cabbage; but by again having recourse to the above remedies, and paying stricter attention to diet and drink, they were again relieved, and soon cured.

Several cases of typhus fever occurred during my practice in this part of the country, but the only one that I shall notice was that of a negro girl aged seventeen years. When I first saw her she was complaining of a pain in her head and back, her pulse was frequent and her bowels disordered; as it was understood she was pregnant, I supposed these affections owing to that cause, and endeavoured to bleed her, but did not succeed; and a gentle dose of the ol. ricini was given her. When I saw her again her disease was a confirmed typhus, the symptoms of debility, lassitude, weariness, desponding countenance, sighing, anxiety and depression of spirits, were prevalent, the pulse frequent, quick, and weak: spiritus mindereri was occasionally given, and the bark in as large quantities, and as frequently repeated as would agree with the stomach; blisters were also applied. Second day, blisters have not drawn, she appears worse, affections of the head increased, pulse as yesterday; she has now tinnitus aurium, delirium without fever, her voice is considerably altered, she frequently awakes from sleep in great alarm, and it is some time before she can be pacified; bark, &c. continued, and the blisters again applied; third day worse, head still affected, has tremulous motion of the tongue, lips and hands; is when awake continually pick-

ing the bedclothes, and when asleep incoherently talking, but her articulation so imperfect as not to be understood. She will raise herself up in bed and call for her clothes, expressing a desire to go a visiting: blisters have not drawn: what more to do than to support the system by bark, &c. I knew not; however, recollecting that professor Rush said in his Lectures, that medicines frequently operate much better after venesection than before, I resolved to see what effect it would have in her case; and as there appeared a great determination of blood to the head, I directed her to be cupped. After taking a few ounces of blood from the back of the head, a blister was applied to the back of the neck which drew remarkably well; from that time my patient began to mend, and was soon cured.

The next and last autumnal disease that I shall notice, is the habitual or chronic diarrhœa, which has, within these few years past, been very rife in this part of the country; but as I have been so frequently thwarted in attempting to cure this disease, I shall treat of it in a very cursory manner. I tried, I believe, almost every remedy that has ever been spoken of as beneficial in this complaint, and far the greater part of them without any advantage whatever. The remedies which succeeded the best with me, were, after giving a gentle dose of *ol. ricini*, pills composed of opium & *ipécacuanha*. An eminent physician who practised here some time since, says, he found a pill composed of ginger and cinnamon, have a very salutary effect in this disease; and one who now practises here says, that he first endeavours to produce a determination to the surface, and then gives the acetate of lead and opium, conjoined, with advantage.

In the winter season pleurisy is not unfrequent, and are generally cured by blood-letting, cathartics, blisters, diluent drinks, &c.

During the spring season, catarrhal affections were frequent, and generally pretty easily cured by such remedies as are usually applied in that disease: the only obstinate catarrhal affection that I met with during my practice here, was that of a gentleman of an impaired constitution, who had long since

been troubled with phthical affections. He tried a great number of the medicines so generally prescribed in that disease, without the wished for effect. The disease still increasing, he became much debilitated and almost exhausted; his cough was very severe, every precaution was taken to prevent its return, and palliatives were applied to shorten its duration, but in vain.

In order to support the system, the bark was prescribed in as large quantities as his stomach would bear: this medicine had a far more happy effect than I anticipated; it not only supported the system, but it also cured my patient. Rashes and scarlet fevers were also prevalent during the vernal months, but were of a slight nature, one case excepted, which was that of an industrious farmer of a delicate constitution and weak breast, owing to his exposing himself in the rain, while the rash was on him—he caught cold, a metastasis took place, and a pneumonic disease was brought on. Blood-letting, gentle purgatives, with a febrifuge mixture, and the antiphlogistic regimen cured him.

With great esteem,

I am, Yours, &c.

G. WILLIAMSON.

DR. JOHN REDMAN COXE.

A Case of Salivation produced in a Child, from a Cent which he swallowed. Communicated to the Editor, by DR. WM. BUDD.

ON Sunday evening, December 31, 1797, I was called into Callowhill street, to visit a little boy, about three years of age, who had an hour before swallowed a cent; he complained of sickness at the stomach, which was soon succeeded by severe vomiting, and continued until next morning.

January 1st. Complains of pain in the stomach, and of a fore throat; bowels were freely opened with castor oil. 2d. A discharge took place from the salivary glands yesterday, which has increased to nearly one pound in twenty-four hours; it appears to be pure saliva, attended with some swelling of the tongue and salivary glands. The oil which he took yesterday produced several stools, some appear green: he still complains of pain in the stomach. 4th. Complains of great pain in the abdomen, which is swelled and hard; I attribute this to the bowels not having been opened by the accustomed dose of oil, during the last forty-eight hours: his mouth continues swelled, and discharges about a pint a day; begins to have an appetite to eat, but is not able to swallow much of any solid food. 5th. The oil opened the bowels freely last evening, and entirely removed the pain and hardness of the abdomen; the spitting has begun to abate and soreness of the mouth somewhat removed: I ordered his mother to give a dose of castor oil daily, and to give me information when the cent should come from him.

February 7th, I was sent for to-day to see the cent, which came from him this morning without any evident pain, but with a copious bilious stool; the cent was very bright, but did not appear to be corroded by the juices of the stomach and bowels in the least degree. From the 5th of January, until the cent was discharged, he continued to have a sore mouth and throat; and if the oil was omitted for twenty-four hours, the abdomen would become swelled, painful and hard. I ordered a repetition of the oil occasionally, for a few days, to keep the bowels open, by which means the soreness of the mouth was removed, and the child restored to perfect health.

Philadelphia, August 1st, 1805.

A Case of Disease produced by taking one Ounce of Corrosive Sublimate, successfully treated. Communicated to the Editor, by DR. WM. BUDD.

DECEMBER 11, 1799, I received a note requesting my attendance on a young lady, about 12 o'clock, who was represented to be very ill. I hastened there, and found her walking about the room without much appearance of extreme danger: on conversing with her concerning the subject of her complaint, I found, that twenty-four hours previous to my being called, she had been suddenly seized with violent pains in the stomach, which were directly followed by profuse vomiting of blood, which symptoms still continued at intervals: the abdomen was swelled as large as a woman's in her seventh month of pregnancy, was very hard, and she had pains at regular intervals, similar to pains in labour; she complained of great thirst, but was not able to retain what she drank any length of time; pulse rather more frequent than usual, but not full: the above symptoms gave me reason to suspect they were owing to some irregularity in the usual periodical discharges, or perhaps she might be pregnant, and the violent pains caused by that; I made further inquiry in hopes that she would relate some circumstance that would unfold the real cause of her disease, but all to no purpose, for she declared she had not taken any thing that could have produced that effect, and that she had been regular but two weeks before, and experienced good health previously to that period. I directed about twelve ounces of blood to be taken from the arm as soon as it could be done conveniently, and gave her two grains of gum opii in pills, hoping that she would be eased by them, but they were almost instantly thrown up. 12th. The swelling still continued, attended with great pain in the stomach and bowels; very thirsty, and the bowels have not been freely opened since yesterday; the bleeding of last night produced no relief, I directed the

same quantity to be taken again, and to give a table-spoonful of the ol. ricini every hour until the bowels should be freely opened.

13th. The swelling of the abdomen has suddenly disappeared during the last night, and the pain likewise abated, so that the patient got some rest; but this morning the swelling returned with the usual symptoms of pain, and great heat or burning of the stomach, and occasional vomiting or belching of blood; for, as she lay on her back, she would raise considerable quantities of blood, mixed with water, by a peculiar action of the stomach, without any exertion on her part; the stomach has become so very irritable that she could with difficulty bear to be touched with the hand, or even to sustain the weight of the bedclothes. She now complains of soreness in the throat and fauces, which partly confirms me in what I frequently suspected, that she had taken some poisonous medicine, and that is most likely to be a mercurial poison, from the affection of the mouth and throat.

I ordered the oil to be frequently repeated through the day, with a double view; 1. That it would be most likely to preserve the stomach and bowels from injury, and from any corrosive matter that might be contained in them; and, 2. The good effects that would be derived from its purgative quality: I likewise directed about ten ounces of blood to be taken, and a large blister to be applied to the region of the stomach, as well as one to each wrist, also her drinks to be of the most diluting kind, such as flaxseed tea, barley water, &c.

14th. I found her generally relieved from the pains in the stomach and bowels; the oil operated very well, and the blisters drew considerably; she says the pain is chiefly removed from the stomach, but has a pricking sensation, as she describes, like sword points sticking in it; troubled with fainting fits. This afternoon her pains returned with redoubled violence, and are attended with considerable fever; the affection of the head still continues, as well as the discharge of

blood from the stomach. She now thought proper to inform me through the medium of a friend, that she had taken on the day before I was called, twenty-five cents worth of merc. corrosive, which, from the general price of that medicine, must amount to an ounce or four hundred and eighty grains; her situation now appeared to be desperate; indeed it is strange, that instant death did not ensue from the enormous dose of poison; the pricking pain, as above described, proceeded, as I suppose, from some of the sublimate in its native state in the stomach; I determined therefore to try the effects of a strong solution of vegetable alkali, which would cause a speedy decomposition, and render the sublimate inoffensive;—the alkaline solution answered my expectation, for it produced instant relief, and remained longer in the stomach than any liquid she had taken before.

15th. Continues better: ordered the solution and oil to be repeated.

16th. Swelling has increased very much since yesterday: complains of great pain in the stomach and bowels, throat very sore and has frequent fits, pulse full and hard. Catamenia made their appearance during last night, and increase to an alarming degree; ordered her to be bled, and take ten grains of alum, with about an equal quantity of sal nitri every two hours till she should get relief, and cold vinegar cloths to be applied to the pubes.

17th. Mœnorrhagia abated, stomach retains its medicine, but is still very sensible to the touch; bowels freely opened, drinks flaxseed tea, and is able to take a small quantity of light nourishment; ordered small quantities of sweet oil at intervals through the day to be taken, and if the bowels should not be freely opened, to have an injection.

18th. Continues to mend, and takes the oil two or three times a day.

20th. The abdomen frequently swells and becomes very hard, but disappears by the operation of the medicine.

January 21, 1800. I was again sent for to see my old patient, who is afflicted in the manner before described, with an additional swelling in the epigastric region of the left side, and a sense of weight and hardness, which she says she has felt for several days; the stomach still remains very irritable and frequently rejects what is taken in it. I resumed my former mode of practice, which appeared to me to be the best and perhaps only means by which I could effect a cure.

22d. I found her relieved from most of her complaints, in consequence, I suppose, of a copious discharge from the stomach, of matter, which resembled pus, and which she says had a saltish taste: I directed her to take a moderate portion of nourishing diet, and to use oil, whenever the bowels required opening.

29th. She still continues mending, and frequently vomits the aforementioned matter, which vomiting is preceded by a sense of pain and weight in the stomach.

N. B. I heard from her some time after: she was in good health, except some slight affection of the stomach, which perhaps may be increased by a strong propensity to eat Cayenne pepper since her illness.

Philadelphia, August 1, 1805.

History of a Case of Death from long continued Abstinence. Communicated to the Editor, by BENJAMIN RUSH, M. D.

August 23, 1805.

DEAR SIR,

THE following account of the uncommon duration of human life under extraordinary degrees of abstinence, was communicated to me some years ago by Judge Fisher of Virginia, by whom it was received from the brother of the unfortunate and probably deranged gentleman, who was the subject of it. The account may serve to enlarge the ideas of physicians of the resources of the constitution to preserve itself, by the aid of that which is the usual cause of its destruction, I mean disease.

From your friend,

BENJAMIN RUSH.

DR. JOHN REDMAN COXE.

King George County, October 11, 1802.

MR. C—S— in the summer of the year 1794, aged about thirty-two years, while riding to the parish church to attend divine service, was seized with hemiplegia, or as some of his physicians termed it, *arthritic vertigo*, which palsied him on one side, rendering his articulation indistinct, and his gait irregular and tottering. He did not fall, but being sensible of the change in his constitution, he rode up to the house of Mr. R—A— which was at hand—and at which he afterwards died. His disposition, which was naturally cheerful, assumed a melancholy complexion. He was attended by several able

physicians, but finding at the end of a year that he had received no benefit from their prescriptions, he formed a resolution of terminating his life by abstinence from nourishment. On the part of his friends, nothing was omitted to divert him from this desperate purpose; but every endeavour proved ineffectual. When other arguments failed, he was tempted, by bringing into his presence such dishes as he was known to be fond of. On these occasions he would shut his eyes, and impatiently desire the dishes to be taken away, confessing that the temptation greatly distressed him; for it is to be observed, that his appetite had not been impaired by the disease.

Finding himself at first tormented by excessive thirst, caused by a fever which supervened in consequence of his abstinence from food, he chewed now and then an apple, carefully spitting away the pulp; but conceiving that even this practice might protract his life, he rejected, after a day or two, the relief it afforded, indulging himself in water alone. In this manner tormented, by alternate paroxysms of hunger and thirst, he lived SIXTY DAYS at least, and retained apparently his usual understanding.

Sir,

Your respectful and obedient servant,

JOHN A. STUART.

ST. GEORGE TUCKER, ESQ.

This extraordinary case is not altogether unprecedented. In the 18th vol. of the *European Magazine* for 1790, p. 124, we have the following account in a paper entitled "*Memoirs of a celebrated French Adventurer.*"—*Editor.*

"In 1782, he was still in the Bastile. He took a loathing to all food, and lost even the necessity of eating. He had al-

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ready continued nine days without sustenance. His negro had in vain certified this extraordinary fact. To ascertain the truth it was resolved, that he should eat his meals out of the Tower, and be carefully watched to see whether he carried any provision to his master. The fact was verified. Mr. de Saint Sauveur, at that time Lieutenant of the Bastile, and Mr. Chenon, Commissary, who frequently saw him in this situation, certify, that the Chevalier de Saint Lubin, abstained from every kind of meat and drink for the space of *fifty-eight* days." He afterwards escaped from the Bastile.

In the same Magazine for October 1783, are accounts of animals living for many, even twenty-five days without eating, when Calabria was destroyed by an earthquake: also an account of "a girl of eighteen years, buried under the ruins of a house six days, having at the ankle, had her foot almost cut off, by the edge of a barrel that fell upon it; the dust and mortar stopped the blood; she never had the assistance of a surgeon; but the foot of itself dropped off, and the wound perfectly healed without any other assistance but that of nature." These are related to Sir William Hamilton, by the Padre Minafi.

History of a Case of Constipation continued: also an Account of a Case of Biliary Concretions. By DR. JOHN VAUGHAN, Wilmington.

August 7th, 1805.

DEAR SIR,

THE case of constipation mentioned in the 1st vol. of the Medical Museum, page 397, has since terminated fatally in despite of every means we could employ to resist it. The olive oil relieved the patient twice, and he then became disgusted with it and refused to take it again. We then resorted to more active purgatives, with our former want of success; they distressed him excessively, producing tormina and vomiting. Injections entirely failed; and finding a case of constipation in Duncan's Commentaries, which was relieved by the use of a garden pump, I procured a hand pump, with a flexible or hose tube adapted to it, and threw up warm water into the intestines as long as the distention could be borne. This process gave temporary relief for a fortnight and failed also.

The patient wearied, at length, with the fruitless efforts to restore him, resigned himself to his fate, with the occasional use of laudanum to mitigate his sufferings. He lay, for the almost incredible term of *forty-eight days*, without the least discharge per anum, and friendly death put a period to his sufferings on the twenty-eighth of June.

I was extremely anxious to have examined the body, by dissection, but was unfortunately detained out of town, at the time, by an imperious case, until putrefaction had taken place. There can be little doubt, but dissection would have afforded some light in this ambiguous and perplexing disorder;—but it was impracticable.

From the effects of the small pump, in this case, I am persuaded that it is much more powerful, and should be preferred to the syringe, in all cases of difficulty. It also is infinitely

more convenient. With a hose tube of from two to three feet in length, a patient may lie in bed; without being exposed to indelicacy, and with but very little inconvenience.

CASE OF BILIARY CONCRETIONS.

In a case of bilious colic, which occurred lately in the person of an elderly lady, who has been many years afflicted with colic, and almost continual uneasiness in the region of the abdomen; during the operation of an active cathartic, she voided about thirty calculous concretions. The largest weighed six grains. They were about the size of grains of maize—angular, had a whitish-coloured nucleus encrusted with a darker lamina, which was susceptible of a fine polish and resembled the enamel of teeth. They were insoluble in water, in acids or in alkalies, but when applied to a candle burnt with a lambent flame, similar to elastic gum; and a considerable quantity of air was disengaged during combustion. They possessed no one quality of calcareous earth, or urinary calculi; and I have no doubt were formed in the gall bladder or its ducts, and discharged into the intestines, by a sympathetic action, excited by the operation of the cathartic. The lady has completely recovered, and with some reason to hope for better health, than while those concretions were lodged in the viscera, obstructing or impeding the ordinary function of whatever viscus they may have been seated in.

I am, Sir, respectfully,

Your friend and humble servant,

JOHN VAUGHAN.

DR. JOHN REDMAN COXE.

To the Editor of the Philadelphia Medical Museum.

SIR,

IF the following case of puerperal convulsions comports with the plan of your Museum, you will oblige me by inserting it.

I am, Sir,

Your friend and well-wisher,

A. B.

Philadelphia,
June 5th, 1805.

Puerperal Convulsions.

July 28th, 1799. I was requested to visit Mrs. D. aged about forty, of a full habit, labouring under puerperal convulsions. About 9, A. M. yesterday, the waters came away, and every thing went on well, though rather tedious. At 9, P. M. she was safely delivered of twins, which were small, but healthy. The placenta came away soon after, with the loss of but little blood. Her spirits were raised at the happy termination of the labour, in consequence of which she exerted herself greatly in talking with her neighbours; and got out of bed not less than three or four times during the night, to discharge her urine, which came away in large quantity. The gentleman who attended her, told me he left her last evening in the most favourable state. This morning, about 9 o'clock, having slept but little, and being very restless during the night, with a slight discharge of the lochia, she was seized with a convulsion. Another succeeded in half an hour, and by the time I saw her at 1, P. M. she had had no less than seven. She was now insensible, very restless, and frequently sighing, skin hot, pulse quick and strong, face much flushed. Her pulse

this morning was very low, and she had taken assafoetida, vol. alkali, and opium, without relief. Her bowels were well opened yesterday. I ordered her to lose ten ounces of blood, which were taken away whilst I remained, with difficulty, owing to the convulsions. She bled freely, and for a short time seemed rather easier. In about ten minutes she had a fit, continuing ten or fifteen minutes, and terminating in an apoplectic stertor, with foaming at the mouth. During the fit the pulse was full and strong. I ordered an emollient glyster, with warm fomentations to the abdomen; and left directions to take away ten ounces more of blood, if the pulse kept up, and the convulsions did not moderate.

At 6, P. M. I found her more quiet, and sleeping easier; has had four more fits, at longer intervals; and at times she appeared to be sensible, by calling for her children, and by knowing her attendants; the skin is cooler, and is more generally moist; slight appearance of the lochiæ. The pulse kept up so much, that she lost the blood as I had directed between 3 and 4, P. M.; pulse still strong and quick, above 140 in a minute. The injection was retained. If the symptoms do not moderate, let her lose 12 ounces of blood in the course of the evening, and apply a large pair of blisters to the ankles. The face is less flushed, and the head appears relieved, as she has less of the stertorous breathing, and less general inquietude. The blood drawn was not fizy. I am told she is rather intemperate in health.

29th, 9, A. M. Four fits, but less violent during the night; she is more sensible, though restless; blisters rose well; lost ten ounces of blood in the evening, which is not fizy; no appearance of lochiæ; sleeps more easy. During the night her bed broke down, and she was obliged to sit up in a chair till it was mended. Passed her water several times, but has had no stool; considerable pain of abdomen, but no sickness or vomiting; breasts rather turgid; pulse still active and strong, and 130 in a minute; tongue white and much bitten during the convulsions; change her linen, &c. daily; continue fomenta-

tions to the abdomen ; bleed to ten ounces if the pulse keeps up, and let her drink punch made of cremor tartar. If her bowels are not soon open give moderate doses of soluble tartar or Glauber's salts.

8, P. M. I found her in a composed and sound sleep, pulse 116, and more moderate ; skin cooler and less flushed ; one copious stool, with great relief. At 3, P. M. the pulse had risen so greatly that ten ounces of blood (not fizy) were taken away. Breasts considerably hard. Apply the children to them. Omit the cream of tartar, as she has taken about two table spoonfuls. Barley water or molasses and water for her common drink, with ℥ij. of nitre to each quart. Has had no convulsions. Slight appearance of the lochial discharge. Appears more sensible than heretofore. Before the last bleeding she complained of very great sensibility of the skin ; even tying up the arm to bleed gave considerable pain. This has subsided. Repeat the bleeding if the pulse rises.

30th. Bowels well opened during the night. Since when, she has been much disposed to hysteria, laughing and talking continually, except whilst sleeping, which is tolerably composed. No convulsions. Breasts more turgid. Apply the children to them. Lochiæ increase. Complains of pain in her side and back. Bathe the parts with volatile liniment. No pain of abdomen. Urine natural. Pulse from 112 to 120, and more moderate. Bleeding not requisite in the night. Tongue white and moist, and much injured by biting it during the convulsions. Ordered nitre grs. x, and one-eighth of a grain of tartar emetic every two hours ; and if the pain of the side increases apply a blister, and bleed to six or eight ounces.

31st. Appears much better. Lochiæ in small quantities. Pain of side relieved by the embrocation. Two stools last night and one this morning with much relief. Pulse nearly 130, but moderate. Tongue white and moist. Talked a great deal yesterday and saw too many friends. Pain of abdomen is gone. Slept but little till the morning. Continue

the nitre and tartar emetic and use gruel without wine, for nourishment.

August 1st. Slept well by the aid of ten drops of laudanum. Much better. Milk increases, and lochia in usual quantities. Pulse 100 and moderate. Tongue cleaner. Sat up yesterday in the afternoon. Urine frequent. Complains of her bruises. Continue nitre, &c. and take broth.

3d. Convalescent. In less than a week from this period she was down stairs.

MEDICAL AND PHILOSOPHICAL REGISTER.

FOREIGN AND DOMESTIC.

HUMANE SOCIETY OF PHILADELPHIA.

Directions, for recovering persons who are supposed to be dead, from drowning; also, for preventing and curing the disorders produced by drinking cold liquors, and by the action of noxious vapours, lightning, and excessive heat and cold upon the human body. Published by the Humane Society of Philadelphia. 1805.

Directions, for recovering Persons who are supposed to be dead, from Drowning.

1. **A**S soon as the body is taken out of the water, it must be conveyed on a board or bier if at hand, to a house, or any other place, where it can be laid dry and warm, avoiding the usual destructive methods of hanging it by the heels, rolling it on a barrel, or placing it across a log on the belly.

2. The clothes must be immediately stripped off, and the body wrapped up in blankets, well warmed. It should be laid on its back, with the head a little raised. If the weather be cold, it should be placed near a fire, and an heated warming-pan should be passed over the body; but in warm weather it will be sufficient to place it between two blankets well heated, or in the sunshine, taking care to prevent the room from being crowded, with any persons who are not necessarily employed about the body.

3. At the same time, the whole body should be rubbed with the hand, or with hot woollen cloths. The rubbing should be moderate, but continued with industry, and particularly about the breast. Apply also heated bricks to the feet, belly, and breast. The immediate application of frictions is of the utmost importance, as many have been recovered by frictions only, when early used.

4. As soon as it can possibly be done, a bellows should be applied to one nostril, whilst the other nostril and the mouth are kept closed, and the lower end of the prominent part of the wind-pipe (or that part which is called by the anatomists, *pernum adami*) is pressed backward. The bellows is to be worked in this situation; and when the breast is swelled by it, the bellows should stop, and an assistant should press the belly upwards, to force the air out. The bellows should then be applied as before, and the belly again be pressed; this process should be repeated from twenty to thirty times in a minute, so as to imitate natural breathing as nearly as possible. Some volatile spirits, heated, may be held under the valve of the bellows whilst it works. If a bellows cannot be procured, some person should blow into one of the nostrils, through a pipe or quill, whilst the other nostril and mouth are closed as before; or if a pipe or quill be not at hand, he should blow into the mouth, whilst both nostrils are closed; but whenever a bellows can be procured, it is to be preferred, as air forced in by this means, will be much more serviceable than air which has already been breathed.

5. During this time, a large quantity of ashes, water, salt, or sand, should be heated; and as soon as it is milk-warm, the body must be placed in it; the blowing and rubbing are then to be continued as before; and when the water, ashes or salt are cooled, some warmer must be added, so that the whole may be kept milk-warm.

Loud noises have sometimes proved successful in recovering such persons and restoring to life. When signs of returning

life are apparent, the frictions must be continued, but more gently.

These methods must be continued three or four hours, as in several instances they have proved successful, although no signs of life appeared until that time. When the patient is able to swallow, he must take some wine, brandy, or rum and water; bleeding or purging ought not to be used, without consulting a physician, who should be called in as soon as possible—but glysters of salt and water may be injected.

After life has returned, if convulsions come on, blood should be taken by direction of a physician.

To prevent the fatal Effects of drinking cold Water, or cold Liquors of any Kind in warm Weather.

1st. Avoid drinking whilst you are warm, or,

2d. Drink only a small quantity at once, and let it remain a short time in your mouth before you swallow it; or,

3d. Wash your hands and face, and rinse your mouth with cold water before you drink. If these precautions have been neglected, and the disorder incident to drinking cold water hath been produced, the first, and in most instances, the only remedy to be administered, is sixty drops of liquid laudanum in spirit and water, or warm drink of any kind.

If this should fail of giving relief, the same quantity may be given twenty minutes afterwards.

When laudanum cannot be obtained, rum and water, or warm water should be given. Vomits and bleeding should not be used without consulting a physician.

The dangerous Effects of noxious Vapours, from Wells, Cellars, fermenting Liquors, &c. may be prevented,

By procuring a free circulation of air, either by ventilators or opening the doors or windows, where it is confined, or

by changing the air, by keeping fires in the infected place, or by throwing in stone-lime recently powdered.

These precautions should be taken, before entering into such suspected places; or a lighted candle should be first introduced, which will go out if the air is bad. When a person is let down into a well, he should be carefully watched, and drawn up again on the least change. But when a person is apparently dead, from the above-mentioned cause, the first thing to be done is to remove the body to a cool place in a wholesome air; then let the body be stripped, and let cold water be thrown from buckets over it for some time. This is particularly useful in cases of apparent death from drunkenness.—Let the treatment now be the same as that for drowned persons. The head should be raised a little; and continued frictions, with blowing into the nostril with a bellows, should be practised for several hours.

In Cases of Suffocation from the Fumes of Burning Charcoal,

The general treatment recommended for curing the disorders brought on by noxious vapours, is to be applied; but the dangerous effects of this may be prevented, by taking care not to sit near it when burning; to burn it in a chimney; and where there is no chimney, to keep the door open, and to place a large tub of water in the room.

In all these, as well as in cases of drowned persons, moderate purges and bleeding are only to be used, with the advice of a physician.

To prevent the fatal Effects of Lightning.

Let your house be provided with an iron conductor; but when this cannot be had, avoid sitting, or standing, near the window, door, or walls of an house, during the time of a thun-

der gust. The nearer you are placed to the middle of a room, the better. When you are not in a house, avoid flying to the cover of the woods, or of a solitary tree for safety.

When a person is struck by lightning, strip the body and throw buckets full of cold water over it for ten or fifteen minutes; let continued frictions and inflations of the lungs be also practised: Let gentle shocks of electricity be made to pass through the chest, when a skilful person can be procured to apply it; and apply blisters to the breast.

To prevent Danger from Exposure to the excessive Heat of the Sun.

Disorders from this cause, or (as they are commonly termed) *strokes of the sun*, may be expected, when a person who is exposed to his rays, is affected with a violent head-ache, attended with throbbing or with giddiness; where the disorder takes place, these symptoms are followed by faintness and great insensibility, with violent heat and dryness of the skin, redness and dryness of the eyes, difficulty of breathing, and, according as the disease is more or less violent, with a difficulty, or entire inability of speaking or moving.

To guard against these dangerous effects of heat, it will be proper,

1st. To avoid labour, or violent exercise, or exposing yourself to the rays of the sun, immediately after eating a hearty meal:

2d. To avoid drinking spirits of any kind, when you are thus exposed. These add an internal fire to the heat of the sun. Vinegar and water, sweetened with molasses or brown sugar, butter-milk and water, small beer, whey, or milk and water, are the most proper drinks for people who are exposed to excessive heat. But the less a person drinks of liquors of any kind *in the forenoon*, the better will he endure the heat of a warm day.

3d. To wear a white hat, or to cover a black one with white paper, when you are necessarily exposed to the hot sun, and to avoid standing still when in such a situation.

4th. To retire into the shade as soon as you begin to be affected with pain or throbbing in the head, with giddiness or with faintness.

If these precautions have been neglected, and the symptoms above described have come on, it will be proper,

1st, To remove the person so affected into a cool, dry place, and to loosen all his garments, particularly those around his neck and breast.

2d. To examine whether the pulse at the wrists or temples beats forcibly, and if it does, to bleed immediately; but if the pulse be weak, or cannot be perceived, bleeding must not be performed.

3d. To place his feet and legs (or if it can be done) the lower half of his body in warm water. But if this remedy fails,

4th. To apply linen cloths wet with cold water, or with cold water and vinegar, to the temples and all over the head.

5th. To administer plentiful draughts of vinegar and water sweetened.

In all cases of this kind, a physician should be sent for, unless the patient recovers speedily.

To prevent the Effects of excessive Cold.

Persons are in danger of being destroyed by it, when they become very drowsy, or are affected with general numbness or insensibility of the body. As the cold which proves fatal, generally affects the feet first, great care should be taken to keep them as warm as possible.

1st. By protecting them when you are exposed to cold with wool, or woollen socks within the shoes or boots, or

with large woollen stockings drawn over them, or when you ride, with hay or straw wrapped round them.

2d. By keeping up a brisk circulation in the blood vessels of the feet, which will be best preserved by avoiding tight boots or shoes, by *moving the feet constantly*; or when this is impracticable, from a confined situation, and two or more persons are exposed together,

3d. By placing their feet, *without shoes*, against each other's breasts.

If notwithstanding these precautions, a person should be rendered sleepy or insensible by cold, he must exert himself and move about quickly, for if he should sleep in the cold, he will inevitably perish. When a person who is travelling in company, begins to be affected in this manner, his companions should force him to walk briskly or to run.

When cold has produced apparent death, the body should be placed in a room without fire, and rubbed steadily with snow, or cloths wet with cold water, at the same time that the bellows is applied to the nose, and used as in the case of drowning. This treatment should be continued a long time, although no signs of life appear; for some persons have recovered, who were to appearance lifeless for several hours.

When the limbs only are affected by the cold, they should be rubbed gently with snow, or bathed in cold water with ice in it, until their feeling and power of motion returns; after which, the bathing or rubbing with snow is to be repeated once every hour, and continued a longer or shorter time, as the pains are more or less violent.

The person thus affected should be kept from the fire, for warmth and acrid application of every kind are very injurious.

*Extract from the Minutes of the Original Vaccine Pock Institution,
in Broad Street, Golden Square.*

TUESDAY, Jan. 29, agreeably to the notice in the summons, a critical examination of Mr. Goldson's second pamphlet was read by Dr. Pearson.

Mr. G. at the outset asserts, that his former conclusion has been confirmed by additional subsequent instances, that the inoculated cow-pock is only a temporary preservative; and hence that a person at one time secure, may become susceptible of small-pox. However they differ in opinion, the author candidly acknowledges the liberal and just conduct of the medical establishment of this institution, of Dr. Rollo, and Mr. Dunning; and "I trust," says he, "that the physicians of the institution will conceive that I feel the marked attention they have paid me. Their sentiments are replete with real and genuine philanthropy, conveyed in such language as to demand not only from the profession, but from the public, a large tribute of applause." But there are other authors, says he, "who have thought proper to substitute abuse for investigation: to record their names would disgrace my pen, and to combat them I find myself unequal."

On the stricture of Dr. Jenner, "that the practice of vaccination had been always ill conducted at Portsmouth, owing to imperfection of virus from beginning to end," Mr. G. remarks, "that the assertion is without foundation in authority; for there was, in all his cases, a vaccine vesicle leaving a scar; nor was there any disease of the skin to alter the progress of it."

Dr. de Carro also having cast a reflection on Mr. G. the compliment is returned, by advising the foreigner, without delay, not to confide in his cases of inoculation with matter of grease;—"which he has with so much ardor dispersed

through the Austrian dominions, lest, at no great distance of time, mischief overtake the subjects and the inoculator."

Mr. G. next comes to a detail of cases formerly published, with observations.

1st. Mr. Grant's child affords a case of small-pox after vaccination. The patient having been inoculated by a confidential friend of Dr. Jenner, neither the inoculator's qualifications, nor the efficacy of the matter, are doubted, as in similar cases of failure when the matter was from other sources, and the inoculator not of the party. Accordingly, the ground of objection is, that the eruptive disorder, on the second inoculation, was not the small-pox; but Mr. G. maintains, that the course and symptoms were such as would have been deemed the small-pox, if published before the cow-pock inoculation. Dr. P. remarks, that there certainly were not such symptoms and progress as he should consider to be decisively the small-pox: for,

' 1. The inflammation was more rapid than usual, and almost disappeared before the fever and eruption.

' 2. The six or seven eruptions which came out on the 8th day died away in the state of a watery scurf, without attaining the state of pustule, or even of vesicle: and he says, he should have not confided in such a case being the small-pox before vaccine inoculation; although he acknowledges that equally irregular and anomalous cases of small-pox have occurred, and given security against future attacks.

' 3. There should, at least, have been a suppurated pock or pustule subsisting in that state for not less than five or six days, and then affording a scab which left a cicatrix. The hard black scab remaining for a month, and leaving an indentation, is what he has frequently seen from variolous inoculation subsequent to vaccine, and in which cases there were no eruptions nor constitutional disorder.

' Mr. G. seems to infer, that the susceptibility of taking the small-pox is not destroyed by vaccination, because, on re-inoculation with variolous matter, there was excited in all his

cases, at least a local inflammation ; which effects not very unusually secure a patient from the small-pox, although there has been no constitutional disorder. But in eighty-four out of one-hundred and two cases at Paris, as cited by Mr. G. no sensible local effects were produced on variolous inoculation after the vaccine. Dr P. says, he cannot admit these cases as the smallest evidence adverse to vaccination.

‘ 1. Because, so far from such local effects not being unusually attended or followed by unsusceptibility of the small-pox, he affirms that such unsusceptibility is not effected with such appearances in one case out of five hundred ; whereas, in Mr. G’s practice, the greater part of his cases, which he considers as small-pox after cow-pock, were merely these local affections excited by the variolous inoculation.

‘ 2. Dr. P. observes, that after small-pox, on a second variolous inoculation, very often similar local affections do occur.

‘ 3. He has seen similar local affections repeatedly, and as frequently on a second inoculation after variolous as after vaccine pock.

‘ Mr. G. supports his opinion by adducing five cases from Dr. Rollo ; in three of which there were pustules in the areola, and a constitutional affection ; and in the other two there were eruptions which did not mature, although the fluid in them excited the distinct small-pox in other persons, who had not gone through either small-pox or cow-pock.—There is no reason to doubt the accuracy of Dr. Rollo’s cases ; but Dr. P. for reasons above given, cannot admit them as evidence of small-pox after cow-pock, and because the variolous matter of local affections, in persons who have gone through either small-pox or cow-pock, will frequently excite distinct small-pox as here related. Mr. G. next calls in the evidence of five cases of variolous inoculation after cow-pock, by Mr. Crockford : but here two of them had only local effects produced, and, in the rest, merely a few pimples broke out.

* Mr. G's. second case, as related in his first publication, is that of Worsfold's child, supposed to have had the small-pox in the natural way, who had the cow-pock three years and two months before. Dr. P. agrees with Mr. G. that his opponents had no right to declaim that the child had not really gone through the cow-pock, considering Mr. G's accurate account of the progress, and of the eschar remaining; but that the small-pox really took place, Dr. P. does not allow; for the seven eruptions which appeared were merely pimples that remained only five days, and never matured.

* In a 3d, which was "Callard's case" of small-pox in the natural way, Dr. P. observes, there was sufficient evidence of the cow-pock preceding; but how far twenty small eruptions, which disappeared without suppuration in six or seven days, will be admitted as small-pox, seems doubtful, especially as they had not the usual aspect even of variolous vesicles. Dr. P. however, thinks that Mr. G's adversaries have not combated him successfully, by alleging that the child contracted a local small-pox from sleeping with another child ill of that disease.

* In a 4th case, Mr. Warner's child, there seems no reasonable doubt that it had gone through the vaccina; but that the fever and twenty-five eruptions, two years afterwards, were small-pox, he hesitates to admit, as they never suppurated, but exuded a small quantity of lymph, and on the 7th day scabbed.

* In a 5th case, "Luscomb's daughter," there were the usual decisive characters and course of the vaccina in the first instance; and three years afterwards there came on a fever, with an eruption on the 4th day, which became pustules; and the matter of them produced the small-pox in others. Dr. P. says, that there is no reasonable doubt of this being a case of small-pox after cow-pock, unless the scabbing in seven days should be considered as an objection: but Mr. G. having added, that the vaccine inoculation was followed by the usual scar, he is of opinion that the case ought to be admitted as

one of cow-pock succeeded by small-pox, although, as Mr. G. observes, it has been treated with levity; and he acutely remarks, that so distinct a case of cow-pock would have been courted as evidence in the House of Commons, however much it has been scouted. But, as Terence says, "*Melius, pejus, prodest, obstat, nil vident nisi quod lubent.*" This is the first admissible evidence that Dr. P. can allow in Mr. G's statement; and it was allowed in the statement lately published by his colleagues and himself.

Mr. G. next calls in evidences from Dr. Rollo's pamphlet, observing, that the thirteen persons re-inoculated with variolous matter after cow-pock, all shewed symptoms, more or less, of susceptibility. Dr. P. can find no support from the publication of Dr. R. in favour of Mr. G's opinion; because Dr. R. explicitly says, the small-pox has not decidedly existed in any one instance. His words are, "The disease excited has been extremely mild, and some doubt may remain whether it was really constitutional affection:" and he adds, which is much against Mr. G. "It is also to be recollected, that many of the remaining five hundred and thirty-seven cases of cow-pock have been occasionally exposed to variolous infection without effect."

The author now under criticism advances to attack the statement lately published by Dr. P. and his colleagues at this Institution.—Prefacing his attack, however, in his usual gentlemanly mode: "I was disappointed," says he, "when I found their experiments consisted solely of repeated inoculations; and I cannot help expressing my surprise that they should have resorted to them exclusively. "Inoculation," says he, "is not the truest or the strongest test; yet the interests of society required, and the spirit of investigation demanded, the most decided mode of setting the question at rest. The first action of inoculated small-pox is on the skin. If vaccination, therefore, should consist in inducing a peculiar affection of it (and which the assimilation of the variolous to the vaccine pock in all the experiments seems to indicate,) it can

be no just criterion; because, like most other affections simply local, it might be diminished, or totally removed, by time, or any other imposed morbid action. They must acknowledge the wide difference there is between inoculation and casual infection. If those who were submitted to both vaccine and variolous tests at the same time, had been kept for some days in a free communication with persons labouring under small-pox, then the investigation would have been most complete, and my wishes complied with; that of inoculating some, and exposing others to infection. After what had been experienced at the small-pox hospital early in the practice, that cow-pock modified small-pox when the two inoculations were combined, it is almost inconceivable why such experiments were made."—Dr. P. says he was utterly astonished by these remarks; for he thought the medical establishment had selected all the circumstances most favourable for producing the small-pox: but they are now told, that repeated inoculations are not the truest or strongest tests, and that they were required to employ the most decided mode of determining the question. And Mr. G. acquaints us that inoculation is inadequate, because the first action of the inoculated small-pox is on the skin; and if vaccination should consist in inducing a peculiar affection of it, no just criterion can thereby be afforded; because, like most other local affections, it might be diminished, or totally removed, by time, or any other morbid action.—So, then, says Dr. P. Mr. G. is pleased to set aside facts from experience, and to substitute reasoning, even hypothetical reasoning; for it is a fact derived from immense experience, that a person having had the small-pox by inoculation, according to certain well known phenomena, is incapable of again taking the small-pox, either by inoculation or in the natural way.

* Now Mr. G. does not assert, from facts of experience, that a person can again take the small-pox after the inoculated small-pox; but he says, "the not taking small-pox by inoculation after inoculated small-pox can be no just criterion; because, like most other affections simply local, it might be

diminished, or totally removed, by time, or any other imposed morbid action." This is, says Dr. P. an hypothesis at variance with experience, which teaches us, contrary to the hypothesis, that the inoculated small-pox is not merely a local affection of the skin, but also an affection of the constitution; at least it is such an affection, that neither by effluvia nor by inoculation can the small-pox be excited a second time. Supposing Mr. G's statement true of the small-pox, then, from analogy, if vaccination only induced a peculiar affection in the skin, it also can be no just criterion.

‘ Mr. G. next tells us what he considers to be the true and strongest test; viz. submitting those under the vaccine and variolous test at the same time, for several days, to a free communication with persons labouring under small-pox; thus inoculating some, and exposing others to infection.

‘ Dr. P. remarks, that he does not disallow that exposure of persons to the effluvia of the small-pox, after either vaccine or variolous inoculation, is an additional test; but he does not allow “that it is a stronger or truer test than a second inoculation;” for if it has been shewn that people have taken the small-pox naturally who could not be affected by inoculation, it has also been shewn that persons have been repeatedly exposed to variolous effluvia without taking the small-pox, but who finally took it by inoculation. But Mr. G. omits to notice, no doubt unintentionally, that his wishes have been in a great measure complied with in the late experiments by the Vaccine Pock Institution; for many of the patients, as related in their statement, were inoculated in the Small-pox Hospital wards, where they remained at least half an hour, sitting on their beds, shaking hands, exposed to their breath, and otherwise coming in contact with the patients. That above sixty patients were re-inoculated; with quite recent matter, with three, four, or five times the usual number of punctures, yet the small-pox could not be excited in one of them. We appeal to the public whether such circumstances were not as favourable for producing the small-pox as can be conceived, and such as have

never before been instituted. Mr. G's insisting that the patients should have been exposed for some days to variolous effluvia, is a demand, which, we trust, is unreasonable and unnecessary.

* Mr. G. however, has neglected to state evidence of another sort, which is, in fact, what he calls the truest and strongest test, viz. exposure to variolous effluvia: for, if he will have the goodness to turn over the pages of our statement of evidence, lately published, he will find, that, in inquiring for patients to be submitted to re-inoculation, two hundred and fifty families, at the fewest, were asked for that purpose, who had been vaccinated; but they refused to be again inoculated, alleging that they had been exposed so often to the natural small-pox, that they must have taken it if they had not been rendered unsusceptible by the cow-pock; and yet many of these families had been vaccinated at an earlier period than any of Mr. G's adverse cases. He has also overlooked the testimonies of the practitioners at Walton, Weybridge, and other neighbouring places, that not one of the patients vaccinated chiefly under Dr. P. and Mr. Keate, as early as 1799, had subsequently taken the natural small-pox. However Mr. G. may estimate the investigation published in their statement by this institution, it has by others been asserted to be *evidence little inferior to mathematical demonstration, and pronounced to be a specimen of medical logic.*

* Mr. G. bestows some strictures upon the procedure in our late trials of inoculating the same patient in different places, at the same time with variolous as well as with vaccine matter, and appears to be totally unacquainted with our design. The object and conclusion of these experiments are explained at p. 66 of our statement. "These experiments strikingly manifest that the same person is equally incapable of taking the cow-pock a second time as the small-pox, as hath been proved five years ago by Dr. P. and been subsequently confirmed; and it has been elsewhere shewn by him, that a person cannot take the cow-pock subsequently to the small-pox." The fact,

that a person cannot take the cow-pock a second time, is the most important one discovered since the promulgation of vaccine inoculation itself in the year 1798. It has been repeatedly determined by Dr. P. in so many ways, that he feels as much confidence in the assertion that a person cannot have the cow-pock more than once, as that a person cannot have the small-pox more than once. The fact is asserted in the several memoirs read at this Institution, and the experiments have been made publicly, both at this Institution, and before Dr. P.'s pupils, in the two preceding summer courses. On this fact, with the confidence possessed from such extensive experience, Dr. P. *proposes re-inoculation with vaccine matter, as a test for determining the state of security against the small-pox, in preference to variolous inoculation*, from the advantages set forth in his memoir at the last quarterly court. Now what, says Dr. P. does Mr. G. oppose to the extensive experience, which he presumes he has a right to state without any just imputation of vanity? Why, truly, the observations of casual vaccine inoculation, in two instances taken from Dr. Jenner's work, published in 1798, at a time when the characteristic properties of the cow-pock were not known, and of which cases of casual inoculation, if thousands were cited, they would only prove that an affection in the part inoculated may be repeatedly excited in the same person by vaccine matter; but this local affection has not been shewn to be the real cow-pock, except in the first instance; and the same local affection may be repeatedly excited in certain persons by inoculation, purposely, with vaccine matter, but especially when applied to cuts and sores of the chopped hands of the country people.

'This local affection (not vaccina) is frequently excited on the breasts and cheeks of nurses who have already gone through the small-pox, by handling children in the cow-pock or small-pox. To illustrate this subject: Suppose a cow to have the small-pox on her udder, instead of the cow-pock; would any one doubt that milkers, with chopped hands or cuts, would not again and again contract a local affection?

Dr. P. humbly presumes, then, that Mr. G. ought not to oppose his experience by such meagre evidence, or until he can bring forward a great number of distinctly related and fully characterised cases of cow-pock by inoculation subsequently to cow-pock or small-pox. But, says Dr. P. full as my evidence is, and indeed more than necessary already, I beg to propose to Mr. G. or any other respectable adversary, to risque, if desired, any stake on the issue of farther experiments of re-inoculation at this Institution, that the result may be laid before the public under the observation and direction of two competent judges, chosen by each party. If the event be adverse to my assertions, I shall deservedly be considered as unqualified for just observation; but if the event be according to my statement, I shall gain little, because the experience I have had must have declared the fact to the most common observer. Dr. P. adds, that he trusts Mr. G. will no longer find it "inconceivable, why such experiments were made." But if he will read the report of this Institution for the year 1800, 1801, and 1802, and the statement of evidence in 1804, it will appear inconceivable to Dr. P. that Mr. G. should not acknowledge that the fact in question, viz. whether a constitution that has undergone the cow-pock is not equally incapable of the cow-pock and small-pox a second time, is not proved by experiments affording evidence as decisive as that of any fact in physiology or pathology.

Mr. G. always writes, even when he differs most in opinion, in the language of a gentleman, and of his worthy intentions no just person can doubt; but it is impossible to read his animadversions of the experiments made at this Institution, without amazement at the evident failure of the author to perceive their views. By way of letting the Institution down gently, he says, "No doubt, our intentions were founded on the most honourable motives, but that they were not called upon to try the effect of cow-pock in a constitution already vaccinated, and that, perhaps, they are not aware of the very important conclusions to be made from the experiments."

That Mr. G. did not see the conclusions drawn by the Institution, is plain, from what has been already said; but what other important conclusions he alludes to is not understood. It is true the Institution were not called upon particularly to try the effects of vaccine matter upon patients already vaccinated; but if they could establish the evidence, conveniently, of two important facts on the same occasion, it would have been unwise to have neglected the opportunity. This was done, and it has been established that a person who has had either the cow-pock or small-pox is again incapable of either the one or the other. The practical conclusion follows, and was set forth fully at the last meeting. Mr. G. next objects to experiments of inoculation of small-pox and cow-pock at the same time, from what happened at the Small-pox Hospital early in the practice; where the cow-pock modified the small-pox when the two operations were combined. Here Dr. P. regrets that Mr. G. has not extended his reading to the report of this Institution for 1800-1-2, and that he has confounded simultaneous agency of the two infectious matters in persons who have not yet been vaccinated or variolated with simultaneous agency of the two infectious matters in those who have undergone small-pox or cow-pock. The Small-pox Hospital cases are of the former description; the cases of the Institution are those of the latter. Dr. P. flatters himself, that, if Mr. G. had read the report of this Institution, he would probably have met with some instruction in the laws of agency of vaccine and variolous matter, when introduced at or nearly at the same time, in the same subject, who had neither had small-pox nor cow-pock. These laws were not ascertained at the time of the publication of the excellent report of Dr. Woodville, and nothing but hypothesis, however ingenious, was offered either by Dr. Woodville or Dr. Jenner on the cases of small-pox-like eruptions, which so often occurred in the Hospital practice. In the examination of Dr. Jenner's claims, published by Dr. P. in 1802, he made his remarks on these hypotheses, but it was his subsequent experiments at this In-

situation that unravelled the mystery which seemed to prevail in the cases alluded to; and it now can be explained in what cases the small-pox by inoculation, or in the natural way, will break out during vaccination, if the time be known when the two matters are introduced into the constitution. Dr. P. flatters himself that Mr. G's objections cannot have the weight of a feather in this part of his objections, until he has refuted the experiments alluded to.

' Mr. G. having finished his remarks on his own cases contained in his former pamphlet, proceeds to relate some recent cases of small-pox after supposed cow-pock. 1. Mr. Callard's child, the sixth of Mr. G's cases, vaccinated April 1803, escaped the small-pox, though exposed often to variolous effluvia, till August 1804; when, after being in the house with a child loaded with small-pox, in ten days she became feverish, and in two days a dozen eruptions appeared like small-pox, and the fever subsided. The eruptions without maturing, died away about the fifth day. Dr. P. can scarcely admit this as probable evidence of the case being small-pox, there not being the decisive characters of that disorder.

' 2. The seventh case of Mr. G; that of Mr. Dance's daughter. There is no reasonable objection against her having had the cow-pock, but the subsequent eruptive disease was equivocal, and so was the eruptive disease excited in another child by the matter of these eruptions; but a third patient, inoculated from the matter of the second, had decidedly the small-pox. However unsatisfactory, Dr. P. feels himself obliged to admit this to be a case of small-pox after cow-pock.

' 3. Case eighth of Mr. G. No doubt the patient had the vaccina in the first instance; and however anomalous the subsequent eruptive disease, as the matter of the eruptions excited the regular small-pox in other persons, Mr. G.'s evidence must be admitted.

' 4. The ninth case of Mr. G. The child (Hitchings) had what was called incomplete variola in the natural way after decisive cow-pock.

' 5. The tenth case of Mr. G. is that of Rendall, which must be admitted as small-pox by inoculation after cow-pock.

' 6 and 7. The eleventh case of Mr. G. are those of the Hodges', in Fulwood's Rents, in which the evidence is so strong for the cases being small-pox after cow-pock, that it is impossible Mr. G. could omit to insert them in his collection.

' 8. The thirteenth case of Mr. G. Capt. Simmons' daughter passed through the cow-pock apparently in a regular manner, in 1801; but in 1804 she took the small-pox by inoculation, for the matter of the eruption produced the distinct small-pox in others.

' 9. The fourteenth case of Mr. G. is that of Smith, recorded in the minutes of our Institution. This Dr. P. cannot consider as evidence for the purpose proposed, because it does not appear that the patient had previously the cow-pock; but there was no doubt of the succeeding disease being the small-pox.

' 10 and 11. The fifteenth and sixteenth cases of Mr. G. are those of Mr. Bowen, surgeon, at Harrow, already recorded in the minutes of the Institution. As Mr. B. informs Mr. G. that in the first of these cases, his own daughter, she took the small-pox by inoculation after the cow-pock, for the matter of the eruption produced the small-pox in others, the only question is, Whether the cow-pock really preceded? The second case of Mr. Bowen is said, in Mr. G.'s work, to have been inoculated at this Institution four years ago, but who took the small-pox lately on inoculation. This is the only case which has been reported in the practice of this Institution, during five preceding years, of any one taking the small-pox after the vaccine inoculation. The answers to the queries proposed by our medical committee to Mr. Bowen have not yet been returned; but in the mean time the case is doubtful, because the proof of its being small-pox is only from the matter of the inoculated part producing small-pox in others; and we

know the local affection produced in persons who have undergone small-pox can excite the small-pox in others. *

* Mr. G. has a chapter on what he calls an hybrid disease in the early part of the practice. Dr. P. flatters himself, if Mr. G. had consulted the examination of Dr. Jenner's claims, and the report of this Institution, he would have been able to have explained the greater part of these cases; but as they do not immediately bear upon the present question, he abstains from farther remarks.

* The observations on varicella are most assuredly just and important. They prove that the eruptions sometimes remain longer than is supposed, viz. longer than six days, continuing even to the 10th, and that they suppurate or become pustules, and thence are liable to be mistaken for small-pox. Mr. G. favours us with a chapter on the difference between casual and inoculated cow-pock with respect to colour and appearance: but, however ingenious, Dr. P. abstains from commenting upon them, because of their not being essential to the grand question before him, and on account of the length of the remarks on other more important parts of Mr. G.'s work.

* 12. The seventeenth case of Mr. G. is one of natural small-pox, eight years after what was deemed casual small-pox.† There is no doubt but the small-pox occurred here in the natural way; but that the patient had previously cow-pock is shewn only by the evidence of farmers. All such cases must be unsatisfactory, for it is known that various affections of the skin may be contracted from animals by handling their sores; and there is a host of evidence in support of the preventive power of cow-pock caught in the usual way among farmers.

* The chapter on the effects of vaccinating on the hand, commences with observations which appear to be just and consistent with what is related in the examination of Dr. Jenner's

* Mr. Bower informed the Institution, through one of the Medical Establishment, that in the case inquired after, *he did not himself see any eruptions, and had only the patient's authority, who refused to be examined.*

† Quere? Cowpock.—E.

claims; but Dr. P. feels no inclination to revive the inquiry: future times may, perhaps, distribute justice which has hitherto been withheld; and the immediate business of the chapter is, to determine whether the casual cow-pock might not possess effects more decidedly permanent than by inoculation, from the virus being deposited on a part of the body, where the skin, owing to its sensibility, may not be capable of giving the necessary stimulus. The result of Mr. G.'s experience is, that the livid tint of the vaccine pock is preserved in the hand or fingers, whether by matter immediately from the animal, or from the human creature, and that it disappears when fresh matter is inoculated in the usual place of the arm.

‘ Mr. G. thinks his experience justifies the opinion, that inoculation in the fingers and hands promises a more certain method of producing a constitutional affection than in the usual way, and he prefers the middle part of the ring finger as the best, being the least exposed to friction. At p. 110, are facts and observations submitted for impartial investigation.

‘ Mr. G. justly complains that illiberal abuse has confirmed his doubts, and given reason to suspect something wrong in the practice, which it is vainly intended to conceal. Dr. P. coincides entirely in opinion with Mr. G. in all his remarks in this chapter, and approves especially of Mr. G.'s conduct in not mentioning the name of the slanderers; for to such writers it is only important to provoke the credit of a controversy: the issue is of no importance to them.

‘ Among many valuable observations in this chapter, which are omitted only because they do not immediately relate to the object in view, are those on diseases of the skin, such as tinea capitis and psoriasis diffusa, which alter the nature of the vaccine pock.

‘ The assertion is made, that a distinctly different kind of virus is produced, having no power of preserving the constitution from any subsequent attack of small-pox, and it has been thought the same circumstances may take place in the inoculated small-pox. Mr. G. does not allow the fact in the latter case, for experience (says he) teaches the contrary. Give me

leave to say (says Dr. P.), that incessant experience in the vaccine disease for six whole years has never instructed me that the skin diseases above-mentioned, or any other, have ever altered the vaccine pock, so that the matter of it did not produce the genuine vaccina in others; or that the patients with such skin diseases were not as secure against the small-pox as in other instances where there was no skin disease. There have been so many instances of skin diseases at this Institution, along with cow-pock, that Dr. P. does not hesitate to believe the above assertion is ill founded. Mr. G. however, states a proposition on the above fact, contrary to Dr. P. viz. "Vaccination is only the agent to excite a certain morbid affection of the skin, which creates in it the property of resisting the eruption of the small-pox." Dr. P. has only to remark, as already done, that such changes by diseases have never been remarked at this Institution among the numbers inoculated with such cutaneous disorders, but many cases have occurred in which the pock or pimple produced had not the usual characters of cow-pock both in the diseased and apparently sound states of the skin; in some of which anomalous cases the susceptibility to the cow-pock was destroyed, and in others it was not. Nor could he say that the greatest proportion of these anomalous cases occurred in diseases of the skin, but the usual characters of the cow-pock were often destroyed by the scratching and rubbing so common in such complaints.

'If Mr. G. had read the cases of simultaneous agencies, or nearly so, of cow-pock and small-pox, as published in the report of this Institution, he would have seen that the appearance of variolous eruptions depends upon the constitutional affection, in some cases, taking place sooner, or as soon, as the vaccine; but when there are no such eruptions, then it depends upon the vaccine constitutional affection taking the lead. The hypothesis, that "the cow-pock produces only an affection of the skin which is preventive of the small-pox, but that this state of it may be removed by subsequent diseases," appears to be both inconsistent with the phenomena, and un-

necessary. It is unnecessary, because the small proportion of failures may be accounted for more rationally; and the phenomena do not accord with the hypothesis; for when the failures have occurred, there has often been no evidence of any intervening cutaneous disease, except, indeed, febrile exanthemata; such as varicella, scarlatina, rubeola, &c.

‘As to whether vaccination prevents the small-pox by making the skin resist the eruption of small-pox, it is a question of the mode by which unsusceptibility is produced; and Dr. P. conceives that it is the fact only which is in question at present. When Mr. G. states that milkers who have had the casual cow-pock are more secure than children, because less liable to skin diseases, Mr. G. forgets that as large a proportion, perhaps, of failures will be found amongst milkers as among children. The apparent coincidence of the cow-pock and small-pox has been explained by the report of this Institution, without being repugnant to the axiom, that two diseases cannot subsist together, at least not in the same part. The hypothesis, therefore, upon this point, by Dr. Woodville, Dr. Jenner, and Mr. Goldson, is now unnecessary, and contrary to fact.

‘Dr. P. cannot help noticing how superfluous Mr. G.’s reasoning is to explain a case which yet remains to be proved; nay, he thinks the contrary is proved, viz. how it happens that the cow-pock affords only a temporary security, or till some eruptive or cutaneous disease occurs: for in scores of instances such cutaneous diseases have occurred, and yet the unsusceptibility of small-pox remains, and in many of the asserted cases of failure no such cutaneous affections intervened. Towards the close of the work, Mr. G. does Dr. P. the honour to animadvert on his proposal for re-inoculation of vaccine matter as a test of security; alleging that he cannot conceive that a second vaccination is a better test than variolous inoculation; for, says Mr. G. “Milkers have the disease more than once. This cannot be controverted. If inoculated cow-pock be the same disease, it must be guided by the same laws; but if any

intervening disease should remove its action on the skin, then a repetition of vaccination would only be deceptive; because, if it should take place, the first will be deemed to have been imperfect without any just reason." Dr. P. has already answered these objections, and regrets that Mr. G.'s reading does not seem to have extended to what he has written; for if it had, he would have found the case of milkers having the vaccina repeatedly is on the same ground as that of having the small-pox local affection repeatedly; and until Mr. G. shews, on a second vaccine inoculation, that the regular cow-pock can be produced, such as would be relied on by competent judges for security, and until he shews also, that vaccine matter inoculated even four or five days after variolous inoculation will produce any thing except a vaccine pock proportionate to the time of its growth, he must adhere to his opinion: that is, as long as the fact remains established, that "a person who has gone through the vaccina is incapable of the small-pox," so long will he maintain that a person who cannot have the vaccina excited a second time, or even after the small-pox, is incapable of the small-pox.

Dr. P. repeats his proposal to Mr. G. of coming himself or deputing two friends to the Vaccine Pock Institution, to decide the questioned facts by experiments, and lay the issue before the public. In the mean time Dr. P. in the name of the Institution in general, and his own in particular, returns his acknowledgments to Mr. G. for provoking the investigation of a subject which is so much wanted to obtain precision in practice, which has been checked hitherto by so many pretenders to knowledge of the subject, and who would wish it to be believed that the history of vaccine inoculation was exhausted by the publication of half a dozen instances of inoculated cases on the promulgation of the new practice. Dr. P. willingly concedes to Mr. G. that a test of security is wanted for many of those who have been or shall be inoculated, because a criterion has been wanting to guide practitioners, and determine whether constitutional affection was produced or not; but, ad-

mitting that even all the adverse cases published are cases of small-pox after cow-pock, which does not appear to be the truth, they will only serve to regulate practice in future; for the immense mass of evidence in favour of unsusceptibility of small-pox after the cow-pock, demonstrates that the failures are more reasonably to be imputed to deceptions and deficiency of knowledge, than to exceptions to the law of the animal economy, that the vaccine produces unsusceptibility of the small-pox."

Medical and Chirurgical Review.

' *January 3, 1805.* On Thursday, January 3, Dr. Pearson received a note from Mr. Jones, of Mount-street, a governor, informing him, that two children of the honourable commissioner Grey were vaccinated two years ago, and declared to be in a state of security from the small-pox; but that Mr. Jones having inoculated them with variolous matter, the infection appeared to have regularly taken, and he was inclined to think they would sicken on the day following. On Friday, January 4, Dr. Wier, of the *Sick and Hurt Office*, desired Dr. Pearson to visit these children in Park-street. Dr. P. found they had been inoculated ten days before with variolous matter, in one place in each arm. In one of the patients the matter had taken, so as to produce a pock not unlike to some cases of irregular cow-pock rather than small-pox. They were already in a scabbing state, but probably contained a little lymph, with which Mr. Jones said he would inoculate other patients who had neither had small-pox nor cow-pock. The other child had a similar pock in one arm, the puncture in the other arm having failed. Neither of the patients had been constitutionally ill, and Dr. Pearson did not hesitate to say that the affection in this case was merely local, although the matter of the pocks might produce the regular small-pox in susceptible subjects.'

' Dr. Pearson observed that there was a scar in one arm in each of the children from the vaccine inoculation. Both Mr.

Jones and Dr. Wier considered these to be cases of small-pox after the cow-pock, until the nature of the cases was explained to them.* *Ibid.*

Observations on a Case of Diabetes Mellitus, by Dr. DUNCAN, Senior; with the history of the morbid appearances which were discovered on Dissection. By Dr. MONRO, Junior.

The history of this case serves to evince, with most others of the same disease, the inefficiency of art to combat it upon any principles of cure that have been yet suggested. The patient was a young woman, who had been long and repeatedly in the Royal Infirmary at Edinburgh, under the care of different practitioners. A great variety of attempts to cure the disease had proved of no avail. Nor, either by regimen or by medicines, could any considerable benefit, even in the way of alleviation, be obtained. The following account of the appearances after death is given by Dr. Monro, jun. and is too important to be withheld from our readers; nor shall we attempt to mutilate it by abridgment. It is proper to observe, that Dr. Monro was assisted in his examination by his father, and by his assistant, Mr. Andrew Fyfe.

‘Account of the Dissection of Isabel Symington, who died of Diabetes Mellitus, in the Royal Infirmary of Edinburgh, March 26, 1804, and whose Body was examined March 27.’

‘1. *Of the Fat.*—The fat within the thorax, abdomen, and pelvis, seemed entirely converted into a gelatinous-like matter, somewhat of an amber colour. It was of different degrees of density, and of different colours, in different parts of the body. In the omentum it was of a straw colour; but around the kidneys, spleen, pancreas, and on the surface of the heart, of a brownish-red colour. In some places there were vessels which passed over the membranes containing it. When slightly pressed between the fingers, it did not seem unctuous.

* Nine tenths of all the reported cases of small-pox after the vaccine, are of this description, owing to practitioners having not discriminated between a mere local affection, and a constitutional disease; the former of which may probably be excited an indefinite number of times even after small-pox itself.—*E.*

‘ Upon examining this substance by one of Dollond’s compound microscopes, I observed a semi-opaque, gelatinous, brownish liquor in the interstitial cellular substance, which, in a great measure, concealed the fat; the greater part of which had been removed by absorption. The follicles of the fat were much smaller than those of a healthy person, and of unequal sizes, the diameter of some of them not exceeding the fourth of that of others. This alteration of the fat is not altogether peculiar to diabetes; a similar alteration has been observed by my father in some cases of anasarca.

‘ The subcutaneous fat was in very small quantity, and was not accurately examined.

‘ 2. *Of the Circulating System.*—The heart was very small, of a pale colour, and contained little blood. Its surface presented an unusual appearance, as the fat upon it was diminished in quantity, and concealed by a gelatinous matter effused into the cellular substance. There was also a small quantity of this matter at the roots of the pulmonary artery and aorta, which extended also along the margo acutus to the apex of the heart. A thin layer of the same kind of matter covered some parts of the left ventricle. The coats of the arteries were not thickened. Upon cutting into the aorta, I observed the innermost coat of a bright scarlet colour, which led me to examine, whether or not the same colour extended through its branches within the abdomen and pelvis. I found the innermost coats of the vessels also of a red colour, though not of so deep a red as the arch of the aorta. The pulmonary artery had the same tinct as the branches of the aorta. This very unusual colour extended from the pulmonary veins into the left auricle, and also to the mitral valve, but upon the pulmonary artery only as far as its semilunar valves. The columnæ carneæ of both ventricles, and the septum cordis, were of the usual colour.

‘ This extraordinary redness of the innermost coat of the aorta and its branches, of the pulmonary artery and pulmonary veins, did not seem to have been the effect of inflammation; for no red vessels could be seen, either by the naked eye, or with

the aid of a microscope. It was not owing to coagulated blood adhering to the inner coats of the arteries, as it could not be wiped off: nor to blood effused between the muscular and innermost coat, as no blood was found there when the innermost coat was removed from the muscular coat.

‘ 3. *Of the Absorbent System.*—The size, colour, density, and internal organization of most of the glands connected with the absorbent system, within the pelvis, abdomen, and thorax, had suffered a material alteration. Many more lymphatic glands were apparent than in the sound state of the body. The iliac, lumbar, mesenteric, coeliac, and bronchial glands were much enlarged. Their size varied, from that of a dried pea to that of a walnut: one of the bronchial glands was about the size of a small hen’s egg. The enlarged mesenteric glands were of an oval figure, much flattened, and of a yellowish colour. There were a great many enlarged glands in that part of the mesocolon, attached to the colon; but I found no appearance of glands upon the coats of the small or large intestines. Those glands nearest the intestines were of the smallest size. Those near to, or at what is called by anatomists the root of the mesentery, were the largest.

‘ The natural texture of many of these glands was in a great measure destroyed. No vessels could be seen in them, though some of them contained matter more or less fluid. The lumbar glands were filled with a matter like the fibrine of the blood. The bronchial glands were to the touch hard, and filled by a calcareous matter of a dirty white colour, and very like to chalk and water.

‘ Although almost all the glands connected with the absorbent system were considerably enlarged, yet none of the lacteals or absorbents seemed to be dilated, nor were any of the lacteal vessels filled with chyle.

‘ The arborescent course of the absorbents of the liver could be distinctly traced, as they were filled with lymph. Unfortunately, in the removal of the thoracic and abdominal viscera, the thoracic duct was destroyed.

‘ 4. *Of the Alimentary Canal.*—Upon the inside of the œsophagus there was some whitish matter. The stomach contained only a small quantity of a glairy fluid, and a small quantity of a matter resembling in colour the yolk of egg, which was probably bilious matter. The contents of the stomach had not the slightest degree of sub-acid smell. The innermost membrane on the left great sac was of a reddish colour; as was also a small portion of the same membrane near the pylorus, and upon it were a number of spots of extravasated blood. The villous coat near the pylorus was much corrugated, and thrown into folds. The great and small intestines contained but a small quantity of liquid bilious-looking fluid, but no hardened feculent matter. A small portion of the ilium bore marks of inflammation in a slight degree. The arch of the colon was much contracted; the ligaments were unusually strong. The appendices pinguedinosæ seemed to have undergone the same kind of change as the fat in the abdomen, pelvis, and thorax. The mesentery and mesocolon were in many places of a reddish colour, which seemed to be given by the reddish-coloured jelly which covered the fat, shining through the transparent peritoneum of the mesentery.

‘ 5. *Of the Assistant Chylopoëtic Viscera.*—The liver, spleen, and pancreas, were found. The gall-bladder was of the usual size, and nearly half full of bile; the colour of which resembled orange orpiment. Upon opening the gall-bladder, I immediately remarked that the bile had a sub-acid smell. Dr. Rutherford and Mr. Shireff, who also examined it, concurred with me in this opinion. It had the common degree of viscosity.

‘ As a proof how fallacious the sense of taste is, and how different in different individuals, in the present instance the taste of the bile appeared different to four very accurate observers; seeming to two to be merely bitter, sweet to a third, and to a fourth almost insipid. The gall ducts were of the usual size.

* The omentum majus extended as low down as the umbilicus. It was remarkably thin, and a small quantity of blood was contained within its blood-vessels. The fat here had undergone the same change as in other parts of the abdomen.

* *6. Of the Organs of Urine and of Generation.*—The kidneys were somewhat lobulated. They were harder to the touch, and more of a pink colour than in the sound state. Both kidneys were broader, thicker, and more rounded than usual, though not longer. The kidney of the right side was much more curved than the left; and upon its anterior surface there was an unusual projection, such as is produced by purulent matter, hydatids or calculi lodged within the pelvis of the kidney. Upon dividing the right kidney into two equal portions by a longitudinal incision, it appeared as if it had been very successfully injected. Many blood-vessels, both in the cortical and medullary part, were filled with florid blood, owing to which the distinction between these parts was not well defined,

* The pelvis, at first sight, seemed to be filled with a transparent yellow-coloured substance, but, upon a more minute examination, this was found to be effused on the outer side of the pelvis and infundibula.

* Upon making a longitudinal section through the unusual projection in the right kidney, it was discovered to be as found as any other part of the kidney, with the exception of a few small cavities within the substance of it, which were capable of containing a garden pea. These cavities were disposed irregularly through it, and were filled with the same gelatinous substance that was observed in other parts of the body.

* The smell of both kidneys was sub-acid, but not so evidently so as that of the bile. The fat around the kidneys had undergone the same change as in other parts. The bladder of urine was contracted. The uterus, Fallopian tubes, and ovaria, were in their natural state.

* *7. Of the Organs of Respiration.*—The pleura costalis and pulmonalis adhered to each other on both sides. On the left

side, the adhesions were partial, long and slender, probably elongated by the ascent and descent of the lungs. On the right side, the adhesions were so short, and so general, as to render it difficult to separate the lungs from the side. A layer of coagulable lymph, about the thickness of an half-crown piece, covered the greater part of the lobes of the lungs on the right side. The greater portion of the cellular substance, and cells of the right lung, was found filled with a cheesy matter of a light green colour, which rendered the lungs as hard as the liver, and so dense as to sink readily in water. Between the diseased and sound portions of the lungs, there was a very distinct line of coagulable lymph.

‘The right lung adhered very firmly to the diaphragm. There was also in it a small sac, which was filled by a watery fluid. Its parietes were lined with coagulable lymph.

‘The lobes of the left lung had nearly the usual feel. But upon cutting into them, blood was found effused within many of the air-vesicles, and into the interstitial cellular substance, especially near the surface. There were many portions of the cartilages, not only in the trunk of the trachea, but also in its branches, of a florid red colour. These portions were of unequal sizes, some of them about a quarter of an inch in length, others less.

‘This florid red colour extended into the substance of the cartilages, and was not produced by blood coagulated on their surface. The vessels containing red blood were not visible to the naked eye within the florid portions of the cartilage. My father, Dr. Home, Drs. Duncan *senior* and *junior*, Mr. Fyfe, and Mr. Shireff, who paid particular attention to this dissection, examined these red portions of cartilage, and were convinced that the red colour was within the cartilages.

‘Besides these morbid appearances, there was a small quantity of watery fluid within the cavity of the abdomen, and also within the pericardium.’

In the opinion of Dr. Duncan, nothing discovered in this dissection affords grounds for any certain conclusion respecting

the nature of the disease. By different pathologists, they will be considered as corroborating different theories, and, not improbably, afford a foundation for new conjectures. He thinks it likely, that the greater part of the appearances which presented themselves were rather the consequences than the causes of the diabetes. We shall be glad to see the reasons which incline the learned professor to this opinion. In the mean time it appears to us obvious to remark, that the kidneys, the disordered function of which affords the constant and characteristic mark of the disease, were in an evidently morbid state; a circumstance which strengthens the opinion that these organs are the primary seat of the disease. The broader, thicker, and more rounded form of the kidneys; the pink colour, exceeding what is natural; the greater degree of vascularity; are all appearances that can only be explained, as it seems to us, upon the supposition of an inflammatory action taking place in them; a supposition rendered further probable, by that general febrile state which is a never-failing concomitant of diabetes, and which in all cases seems to indicate the presence of inflammation in the system. If this view of the disease be at all well founded, it evidently leads to a mode of treatment the very reverse of what has been hitherto pursued. Instead of tonics, astringents, cold bathing, and a stimulating diet of animal food (means that have been shewn by abundant experience to possess so little efficacy), a mild antiphlogistic regimen, with occasional evacuations, and topical remedies, suited to the habit of the patient and the degree of topical affection, promises, in our opinion, to fulfil the intentions of the practitioner more successfully, as squaring better both with the phenomena of the disease, and the appearances on dissection.

*Ibid—*from *Duncan's Annals of Medicine*, for 1803—4.

Fœtus found in the Abdomen of a Boy fourteen Years of Age.

THIS extraordinary phenomenon occurred lately in one of the French provinces, and was communicated to the *Ecole de Medicine* of Paris by M. Blanche. The youth was of a feeble constitution, and from early infancy had complained of a pain in the left side. This part gradually increased in bulk; the last false ribs became elevated, and presented an appearance of deformity. Things went on in this way with little alteration as he grew up, till within a few months of his death. His disease was at one time supposed to arise from worms, and at another from the disorganization of some one of the viscera. The pain at length grew more acute, accompanied with fever and purulent spitting, and ended at length in marasmus.

A few weeks before his death he passed by stool a lock of hair. On examination of the body after death, a large tumour was found in the left hypochondrium, within the colon, or communicating with it. Upon opening the intestine, the tumour was found covered with purulent yellow matter, and contained a mass of hair and a fœtus nearly ossified, and of a very irregular figure. The head was elongated from before hindwards, and the scalp was covered with hair: immediately below two small tufts of hair, which occupied the usual situation of the eyebrows, a depression was observed, seeming to point out the seat of the orbits, near which was a cartilaginous substance in the situation of the ear. There were seven teeth, which were very compact in their structure. The trunk was bent forwards. In the usual place of the superior extremities were two osseous points denuded of skin, and a similar appearance at the place of the right inferior extremity. The lower extremity on the opposite side was entire, and presented different curvatures: the foot had only three toes, each furnished with a large and thick nail. Something like an umbilical cord was observed arising from the anterior part of the neck, and

which, becoming enlarged, was soon lost in a spongy mass adherent to the internal surface of the colon. The whole of the foetus gave a resistance to the touch like an osseous substance; which shews it to have been probably as old as the subject to which it was attached.

The singularity of this case induced the Society to refer it to a committee for a more particular investigation; and Messrs. *Cuvier, Richard, Alphonse Leroy, Baudelocque, and Jadelot*, were nominated for the purpose. From their report it appears that the mass forming the tumour had many points of resemblance to a human foetus. It was situated in a cyst within the transverse mesocolon, and which communicated with the cavity of the intestines; but the communication was narrow, and evidently recent or accidental. The tumour therefore was not situated within the primæ viæ. The mass being dissected with extraordinary caution, discovered traces of some of the organs of sense; there were likewise a brain, spinal marrow, and nerves of a very large size; muscles that had degenerated into a kind of fibrous matter; a skeleton composed of a vertebral column, a head, a pelvis, and the beginnings of almost all the extremities; an umbilical cord, which was very short, and inserted into the transverse mesocolon, exterior to the cavity of the intestine; lastly, an artery and a vein, ramifying at each of their extremities, both on the side of the foetal mass and on that of the subject to which it was attached.—The existence of the preceding organs is quite sufficient to establish the individuality of the mass, and to prove that it was not a mere appendix or excrescence of the subject in which it was found, although it was deficient in the organs of digestion, respiration, urinary secretion, and generation.

With respect to the origin of this foetal mass (for such it must be admitted to be), the committee take some pains to prove that it could not have been introduced into the body of the boy after birth, for his sex was perfectly ascertained; of course, he could not have been fecundated; nor could he have fecundated himself, there being not the least trace of the fe-

male sex discoverable in him. It must therefore, they conclude, have been born with him. Its situation in the mesocolon still remains unaccounted for: the committee, however, offer the following explanation of the matter.

It is not uncommon to observe newly-born animals united together by the back, belly, or head, or in many parts at once; this might without difficulty be conceived to take place from compression of the two embryos whilst in nearly a gelatinous state in the uterus. In other cases, the two animals are so identified, that several organs are wanting to each of them, and are replaced by organs common to both. In the former case, the monstrosity is owing to a mechanical cause only; in the latter it must be referred to a primitive fault in the organization of the germs. In the case detailed above, either of these circumstances may have happened: one of the germs may have penetrated the other by some mechanical cause; or it may have been the effect of the primitive constitution of the germ, the explanation of which is not more obscure than every thing else pertaining to the mysterious subject of generation. Upon this idea, our surprise must cease at finding a foetus existing in the abdomen of another individual; and it becomes a matter of indifference in which of the sexes such a phenomenon takes place. The mode of its adhesion and growth is quite analogous to that of extra-uterine foetuses, and which is now sufficiently understood.

Ibid.

An Account of the Morbid Appearances observed in two Cases of Diabetes Mellitus. By DANIEL RUTHERFORD, M. D. Professor of Botany in the University of Edinburgh.

C A S E I.

Dissection of John Robinson.

Upon opening the body, a much greater quantity of fat was found both under the skin, and in the cavities of the abdomen and thorax, than might have been expected from the apparent emaciation of the body; indeed, the skin was uncommonly thin.

In the abdomen the blood-vessels all seemed unusually large, and very much distended with blood. The omentum contained a considerable quantity of fat, around large veins filled with black blood. The stomach and small intestines were of natural size and appearance, except that, on the coats of the intestines, the vessels were all very large, and distended with blood, even at their minutest ramifications, giving them exactly the appearance as if they had been well filled with a red injection. The coats of the smaller intestines seemed thicker, and more pulpy than usual. The colon was very large, and distended with air to the utmost; it formed a large doubling under the liver; throughout its whole length, contained very many little balls of hardened faeces. The mesentery was considerably loaded with fat. The vessels were proportionally large and distended as those of the omentum. The lymphatic glands were uncommonly large, soft, and red; their surface too was painted with many red vessels, or with vessels filled with red blood.

The liver, perhaps rather small, was otherwise in every respect in the most natural state, except that it lay far up under the edge of the ribs, pressed thither perhaps by the distended colon. The gall bladder rather large and flaccid, yet containing a considerable quantity of very deep yellow bile. The pan-

creas was perfectly sound and natural, and also the spleen, though perhaps rather large. The kidneys were much augmented in size, soft, with their surfaces painted with numerous vessels. The vessels were uncommonly dilated. The emulgent vein, *e. g.* of the right side, was not under 3-4 of an inch in diameter, as it appeared distended with blood. The ureters also were considerably dilated, the bladder seemed capacious, its coats thickened; and it was half filled with liquid.

In the thorax there was a considerable quantity of fat in the mediastinum, and in the lower part especially, running along the diaphragm. The lungs were apparently perfectly sound; a few adhesions were observed betwixt them and the sides of the thorax, and also betwixt them and the pericardium. The lungs in texture were perfectly right, or even perhaps more spongy and pervious to air than common. The heart of moderate size, flaccid, and pale, though the coronary veins were greatly distended with black blood. The large cavities contained a considerable quantity of very dark blood, generally fluid, though some had coagulated slightly both in the right auricle and ventricle. In the anterior mediastinum, in the site of the thymus, was a cluster of glands altogether like those of the mesentery, in several of which were calculous concretions, one not much smaller than a small horse bean. The proper glands of the lungs, those situated at the ramifications of the trachea, were unusually large, soft, and of a brilliant black colour.

The age of this man was between 40 and 50.

C A S E II.

Dissection of Ann Laidlaw, aged 9 or 10.

On external examination, every part of the body seemed to be much emaciated and reduced in bulk, except the abdomen, which was uncommonly distended with what was afterwards

found to be air in the stomach and smaller intestines, and faeces collected in the larger ones.

When the muscles covering the abdomen and thorax were thrown back, they seemed to be very slender, and of a rather more florid red colour than they usually are in the healthy subject. The fat was entirely abolished, nothing being left but the cells in which it was formerly contained. The lungs on both sides adhered slightly in some places to the pleura collalis; but, on the right side, besides adhering every where very firmly to the pleura of the mediastinum, a quantity of coagulable lymph, of a yellowish colour, was found effused between the pleura of the inferior and middle lobes of the lungs and the mediastinum. On both sides, the lungs were rather of a pale colour externally, but they felt firmer to the touch than in the healthy state; and, on cutting into the substance of them, a puriform fluid was seen exuding from different places, although no distinct tubercles could be perceived, and there was little more than the common quantity of serum effused into either cavity of the thorax.

The pericardium contained about four ounces of a yellowish transparent serum. The heart was of the natural size, unusually free from fat, and rather of a pale colour. The right ventricle very flaccid, the left firm and contracted. The internal structure of the heart was natural; but, on opening the aorta, the inner substance of the anterior side of it was of a red colour, and the redness extended from the commencement of the aorta to that part where it passes through the diaphragm into the abdomen. The aorta below the diaphragm was, in every respect, in a healthy state.

The pulmonary veins and vena cava did not appear to be any way diseased; several of the bronchial glands were considerably enlarged; in particular, one on the right side, which resembled a middling-sized walnut, and contained a good deal of a brownish substance, of a consistence rather thinner than cheese. The trachea was perfectly natural.

The stomach was much distended with air, but, in other respects, had a healthy appearance, both externally, and when it was laid open to examine the internal coat. The upper part of the intestinal canal was uncommonly distended with air, and, in some places, the blood-vessels near the juncture of the mesentery were filled with blood, giving somewhat of the appearance of inflammation. The caput cœcum, the colon, and rectum, were every where filled with hard fæces, by which they were distended to a size far greater than could have been thought possible in so young a subject: in other respects they were healthy. The glands of the mesentery and mesocolon were enlarged; but, though very numerous, none of them had attained a size larger than a common bean somewhat flattened, and some of them nearly white. The omentum was small, contracted, and completely free from fat. The kidneys were somewhat enlarged, their colour natural; but, on cutting into them, the *tubuli uriniferi* were fully more distinct than usual, and the pelvis of each was also considerably enlarged: no other morbid change of structure was perceived. The ureters were much larger than common, in some places being nearly half an inch, in other places more, in diameter. The right lobe of the liver adhered firmly to the diaphragm in many places; but, in other respects, both as to external appearance and internal structure, it was quite sound.

The gall bladder contained a small quantity of light-coloured yellowish bile. The bladder was nearly empty, but of a natural appearance. The spleen, pancreas, uterus, fallopian tubes, and ovaria, did not seem to be any way diseased.

(CIRCULAR.)

BOTANIC GARDEN, South-Carolina,
Charleston, 16th August, 1805.

SIR,

IT affords us very considerable pleasure to be enabled to announce to you, and to every lover of science, the establishment

of a *Botanic Garden*, in this place. The situation of our state, so near the tropic, induces us to believe, that we possess many advantages, for the cultivation of exotics, which more northerly climes are deprived of; and we, therefore, flatter ourselves, with the pleasing prospect, of being able to effect, with the assistance of our friends abroad, a very handsome, as well as useful and extensive *Public Establishment*, for the diffusion of *Botanic Knowledge*.

Our first concern, will be the examination and arrangement of our *indigenous plants*; among which, there are, doubtless, many non-descripts. To extend the knowledge of our favourite pursuit, and to enlarge the field for *botanic researches*, we beg leave to propose to you an exchange of our indigenous plants, and of such exotics, as the one can procure, and the other may want.

We solicit for ourselves, and our infant establishment, your friendship and assistance; and the more so, as a reciprocity of good offices, will not only secure to us individual esteem; but will, at the same time, contribute to perfect the science, to which we are mutually attached.

I am, Sir, Respectfully,

Your Obedient Servant,

JAMES SIMONS,

Chairman of the Standing Committee.

Communications to be addressed to either of the Standing Committee, viz.

Dr. JOSEPH JOHNSON,
Dr. BENJAMIN B. SIMONS,
Dr. FREDERICK DALCHO,
ROBERT PRINGLE, and
JAMES SIMONS, Esquires.

The 3d Vol. of the Asiatic Annual Register, contains an account of the life of a very eccentric character, the late General Martin, in which are the following particulars :

“ During the last 15 years of his life, he was much afflicted with the stone and gravel; and disliking to undergo the usual surgical operation for that complaint, his ingenuity suggested to him a method of reducing the stone, so curious in itself, and so difficult in the execution, that we should have doubted the truth of the fact, were it not attested by the positive evidence of several gentlemen of the first respectability. He took a very fine steel wire, of almost a foot long, one end of which he cut in the manner of a file. The wire thus prepared, he introduced by a *catheter*, through the *urethra*, into the bottom of the bladder, where the stone was seated. When he found the wire touch the stone, he gently worked it up and down, so as to give it the effect of a file; and this he continued to do for 4 or 5 minutes at a time, until the pain, which the operation of the wire produced, was so excruciating, that it obliged him to withdraw it. But finding that small particles of the stone discharged along with the urine after the operation, he repeated it in the same manner from time to time, till in the course of 12 months, he succeeded in completely reducing the stone.

“ This circumstance exhibits a curious and remarkable trait of the eccentricity of his character. The contrivance was in itself ingenious; but his patience and perseverance in carrying it into effect are so very extraordinary, that we apprehend there are few men who, in a similar situation, would not rather indure the complaint than have recourse to the remedy.

“ Some years after the operation, gravelly concretions began again to form in his bladder; and, as he did not choose to try the wire a second time, these continued to increase until the end of the year 1800, when they finally occasioned his death.”

Extract from the British Critic, in a review of a Pamphlet, entitled, "An account of Baptisms, Burials, and Deaths, by Small-pox, within the Parish of Boston, in the County of Lincoln, &c. &c."

"We shall briefly state the substance of the result, and of the computations. From the former it appears, that very nearly one-twelfth part of all the deaths in Boston, within fifty-four years, have been occasioned by the small-pox; and from the latter, that it is probable there have died by the same disorder, in the United Kingdom, within the same period, 1,762, 135: or, 32,632, annually; and in all Europe, 22,026,699; or, 407,901, annually. The data, on which these computations are founded, seem to be free from exaggeration; and surely, the whole is sufficient to awaken the most inattentive persons to a serious consideration of the importance of vaccine inoculation."

Royal Jennerian Dinner.

Friday the annual meeting of the Governors, President, Vice-Presidents, and Supporters of the Institution for the extermination of the small-pox, took place at the London Tavern. —About 230 persons sat down to dinner; after which *Nobis Domine* was sung in very fine style.

Mr. Travers, in a very neat speech, described the present state of the society, and the progress of the Vaccine System. He stated that the small-pox was totally eradicated from Berlin, Geneva, and Vienna, as could be proved from the very highest authority. In England it was daily disappearing, as would appear by the bills of mortality. The annual average of deaths for 50 years past was 2018; in the year 1804, they amounted to only 622. The deaths by the small-pox within the last two months amounted to only 42.

According to the French report 60,000 persons had been secured in the course of the last three months from the ravages of that destructive disorder. Mr. Travers read several extracts from a pamphlet published in France, in which Dr. Jenner was described, as the saviour of the rising generation. He had no doubt since Dr. Jenner's discovery had been made a national concern, in a few years this dreadful disorder, which has been arrested in its progress, would be totally eradicated in England, where it would be known only by name.

Dr. Jenner's health was drunk with three times three, attended with thunders of applause. The doctor returned thanks in a very neat and appropriate speech. He described the success of his endeavours, and added, that he was enabled to inform the society, that the enemies of the Vaccine System had been able only to produce two cases of failure from the bills of mortality, one of which was of a child who died twelve months after of the scarlet fever, and the other three months after in shedding its teeth.

Mr. Chenevix's mode of preparing James's Powder.

Dissolve together or separately, in the least possible portion of muriatic acid, equal parts of the white oxide of antimony (formerly called Algaroth's powder) and of phosphate of lime. Pour this solution gradually into distilled water, previously alkalized by a sufficient quantity of ammonia: a white and abundant precipitate will take place, which well washed and dried, is the substitute I propose for Dr. James's powder.

Philosophical Transactions.

A Board of Health has lately been established for the purpose of preparing and digesting regulations for the most speedy and effectual modes of guarding against the introduction and spreading of infection, and for purifying any ship or house in

case any contagious disorder should manifest itself in any part of the United Kingdom. This Board is to hold its meeting at Somerset-place, and it is composed of Sir Andrew Snape Hammond, Sir Lucas Pepys, Dr. Reynolds, Sir Francis Milman, Dr. Hunter, Dr. Heberden, Sir Alexander Munro, and Dr. Harnes.

Month. Mag.

Mr. Stoddart gives the following as a good method of gilding upon steel.—To a saturated solution of gold in nitromuriatic acid, add about three times the quantity of pure sulphuric ether, and agitate them together for a short time. The gold will be soon taken up by the ether in the form of nitromuriate of gold, leaving the remaining acid colourless at the bottom of the vessel, which must be drawn off by means of a stop-cock. The acid being discharged, the instrument to be gilt, having been previously well polished and wiped clean, is to be dipped for an instant into the ethereal solution, and on withdrawing it, as instantly washed by agitation in clean water, to get rid of a small portion of acid necessarily taken up with the metal. If this be neatly done, the surface of the steel will be completely and very beautifully covered with gold. *Ibid.*

Mr. Doberimer proposes the following method to make white lead. Dissolve litharge in weak nitric acid, and precipitate this solution with prepared chalk. The precipitate washed and dried affords a cerusse of the whiteness of snow. *Ibid.*

A Lamb was lately yeaned at Mr. Browns High Winder, in Westmoreland, (England) with eight legs, two tails, two separate bodies, two necks, and only one head.

A Goose, belonging to Mr. J. Lishman, of Slurdys, near Cartmel, this season produced a gosling having four wings and four legs, and otherwise perfect. *Ibid.*

When ink-spots have remained long, they become iron-moulds, and are then taken out with more difficulty, and the more so, the longer they stand, in consequence of the iron, by repeated moistening and exposure to the air, having acquired such an addition of oxygen as to make it insoluble in acids. To discharge these old stains, an alkaline sulphuret, or liver of sulphur, should be first applied in solution, and after this is well washed off, the lemon juice or other acid should be applied.

As connected with this I shall here mention the best mode of taking out fruit or wine stains, and spots of grease or of wax. For the first, put about a table spoonful of marine acid (spirit of salt) into a tea-cup, and add to it a tea-spoonful of powdered manganese. Then set this cup in a larger one filled with hot water, moisten the stained spot with water, and expose it to the fumes, that arise from the tea-cup, till the stain disappears.

The fumes are those of the oxygenated muriatic acid; but as they discharge all printed and dyed colours, this mode is only applicable to white articles.

Grease spots are most effectually removed by a diluted solution of pure potash, or caustic lye. Stains of white wax are taken out by spirits of turpentine, or sulphuric æther; and the marks of white paint may likewise be removed by the last mentioned substance.

Skrimshire's Chemical Essays.

Receipts for making Writing-Ink.

To one quart of rain water, or soft river water, put four ounces of blue gall bruised, two ounces of green vitriol or copperas and two ounces of gum arabic grossly powdered. Let the mixture be well shaken or stirred about now and then, and in twenty-four hours it will be fit for use. It is most conveniently made in a wide-mouthed bottle that will hold near double the quantity, where it may sometimes be shaken together brisk-

ly; but be sure you let it settle again before you pour any off. When you have used all that can be got off clear, a little more than half the quantity of the same ingredients will make you another quart.

What is written with this ink looks pale at first, but after a few hours becomes of a fine black, and I believe will never change.

Baker's Employment for the Microscope.

*Mr. Holmes' Receipt.**

R. galls $\frac{3}{4}$ 3: bruise and steep in lbs. 3 of white wine, beer or rain water; stir twice daily for eight days, add then $\frac{3}{4}$ 3 of clear gum arab. and stir twice daily for two days, then add $\frac{3}{4}$ 1 of green copperas, stir twice daily eight days longer, then strain through a muslin cloth and bottle it up with $\frac{3}{4}$ 1 of alum.

Universal Magazine of 1749.

Ribancourt's Receipt.

A series of Experiments made by Ribancourt, has furnished us with the following valuable receipt, for producing an uniformly black and permanent ink. 8 oz. of galls, and 4 of log-wood; are boiled with 12 lbs. of water for an hour, or till one-half of its quantity is evaporated. This liquor is then percolated through a hair sieve, and 4 oz. of vitriol, or sulphat of iron, 3 oz. of gum arabic, 1 oz. of copperas, or sulphat of copper, and 1 oz. of sugar candy are added. The whole mass is stirred to promote the solution of the salts and gum, after which it is left to stand for 24 hours. The liquid is then poured off from its coarse sediment, and preserved in well stop-ped glass, or stone jars. This ink acquires a beautiful black colour, which it retains for a long time.

Chem. Annal. Vol. II.

* This gentleman was keeper of the records of the Tower.

Dr. Caldwell has now in the press, "A Treatise on the hidden nature, and the treatment of intermitting and remitting fevers, by J. Senac, M. D." translated from the latin, with notes.

DEATHS.

William Woodville, M. D. &c. physician to the Small-pox Hospital. Author of Medical Botany, of the History of Inoculation, and of a Treatise on the cow-pock. —Dr. Adams, Author of a Treatise on Morbid poisons, is elected in his place.

John Clark, M. D. &c. and Senior physician to the Infirmary of New Castle. Author of "Observations on the Diseases of Hot Climates, &c."

Dr. Noehden, conductor of the foreign department of the Medical and Physical Journal.—Dr. Arneman of Hamburgh, has undertaken to superintend this department.

James Currie, M. D. &c. of Liverpool, (England) Author of an invaluable Treatise on the effects of cold water in diseases, &c.

✿ We feel much gratified in observing that communications from the Museum are introduced into those valuable periodical English publications, the Medical and Chirurgical Review, and the Medical and Physical Journal. We shall be happy however if the Editors of the last mentioned work, will be as open as the former, in avowing the source from whence they extract their communications; as from the manner of their publishing those from Drs. Benjamin and John Rush, in their 14th vol. pp. 7 and 10, it would seem as if they were made directly to themselves. As we are ourselves extremely particular in noticing the source of every article introduced into the Museum, we hope the like justice will be administered to us. *Editor.*

✿ The occurrence of the Yellow Fever in Philadelphia, by the obstruction which produced in business of every description, must plead our excuse for the tardy appearance of the present Number. *E.*

MEDICAL MUSEUM.

VOL. II.....NO. III.

Observations on certain Cases of secondary Disease, subsequent to the Measles, in a Letter to BENJAMIN RUSH, M. D. by —.

District of Maine, March 9, 1805.

MY DEAR SIR,

LEST you should either not have seen it, or have forgotten it, I am desirous to put into your hands a short treatise on the *measles of Jamaica*, which the author represents (and I think truly) as differing from the usual measles of Europe. But before I proceed, I wish to make known to you certain cases (as I apprehend them to be) of *secondary* disease; which followed a visitation of the measles, in 1802, in the township where I reside, which lies about N. Lat. $44^{\circ} 16'$, and is forty miles from the sea.

This visitation appeared with us in the early summer months. As usual in this complaint, some of the patients called for medical advisers, some managed for themselves, and some let the disorder take its course. Many patients, in the space of some weeks or months after their attack had ceased, experienced considerable illness, which, or at least the particular form of which, I am inclined to attribute to the influence of *measles* which had been *ill cured*.—From the cases of this description, I have selected *five* of the dysenteric class, which occurred under my own ob-

tice, in two families living close to each other in a healthy part of the country, and of which I can speak with some certainty, as three of them ended fatally, and were followed at my desire and in my presence by dissections. I add a *sixth* case of the dysenteric kind, which took place within my own knowledge also, but under *mixed circumstances*; that it may serve in our general comparison. *Two other* cases will afterwards be touched upon, of a *pulmonic* nature, which followed ill-managed measles; and seemed to have a great correspondence with the malady of the five first of our patients.

C A S E S.

Case I. August 9, 1802, in the afternoon, a healthy little girl nearly three years old, was seized with some dysenteric symptoms. The next afternoon she had fits, which left her insensible; but in the evening, her senses returning, she rose and walked into an adjoining chamber. The stools which still occurred, continued loose and of various colours and kinds; but she complained of no pain except in her bowels; and even there, the pain seemed rather partaking of distress, than violent or constant. On the 13th, her pulse became exceedingly slender; her hands grew cold before the rest of her body, and at midnight she quietly expired.

August 14, the *body was opened*. The larger intestines, from the cæcum to the rectum, appeared inflamed in their inside, under the villous coat. They were also much *thickened*, and the outer coat was so *hardened*, as to appear to have advanced a step towards becoming cartilaginous; exhibiting, as to mass and substance, some faint resemblance to the gizzard of a young fowl.—On the mesocolon and on the *outside* of the larger intestines, were oval *tubercles* to the number of 80 or 100. Some were of the size of a dwarf (or French) bean; their colour was a dark red; and their consistence equal to that of the liver; but they were free from ulceration. The *mesentery* had many of its glands enlarged, or at least it exhibit-

ed many tubercles; of which some were inflamed. One portion of the *smaller intestines* also was inflamed to a considerable extent, but it had no tubercles.

The intestinal canal in various parts contained soft *faeces*; but had neither hard balls of *faeces*, nor contractions, nor one part of the intestines thrust within another part, nor could any other unusual affection be perceived in them.

One worm (*a lumbricus teres*) was discovered with faint remains of life.—But no perforation of the gut was seen in the parts examined, nor any worm in the cavity of the abdomen, which could explain the fit.

A part of the left lobe of the liver had its blood vessels turgid; and the liver in general seemed much enlarged. The gall bladder was full of dark-coloured bile.

The outer integument of the right kidney was inflamed.

The lungs, as seen through one part of the diaphragm, appeared to be sound.

Case II. August 14. A boy about two years and a half old, living in the next house, and apparently of an excellent constitution, was seized much in the same manner; that is, with violent purging, attended with fever, blood, mucus, and tenesmus. The fever ran high, but the pain by no means appeared to be considerable. He died on the 17th, in a fit.

On the 18th the *body was opened*. The minutes of this case being lost, I can only state in general, that the *tubercles* which were here discovered, were diffused over the upper, as well as over the lower intestine, and still retained their station on the mesentery and mesocolon; their number amounting in the whole perhaps to 200. There were worms also, like the preceding, in the intestinal tube; but they were here 22 in number, and of the medium length perhaps of eight inches.

Case III. August 15. A female infant was violently seized with dysenteric symptoms, attended however with no remarka-

ble degree of pain. After a struggle of 5 or 6 weeks, she recovered.

Case IV. August 17. A girl, aged 6 years and 8 months, was taken ill with dysenteric symptoms ; but like the rest, she experienced little pain ; being able to move about the room till a short time before she died ; which happened on the 29th.

Her *body being opened*, the tubercles were found scattered as in the second case ; but they prevailed most on the outer surface of the greater intestines. Some of those tubercles had either receded from an inflammatory state, or had not advanced into it ; for their colour was yellow. Some were as large as a kidney (or English) bean. Some had penetrated so as to shew themselves on the inner surface of the gut. One tubercle had separated, owing to the mortification of the surrounding parts ; and this separation was on the inner side of the intestine. The whole of the colon was inflamed ; it was also thickened, but it was tender to the feel ; and within, it was of a dark red colour, resembling that of a ripe mulberry ; being under the operation of gangrene.

Worms, like the preceding, appeared to the number of 24 ; some of which had entered the œsophagus.

The liver exhibited little that was peculiar.

The spleen was unusually soft and livid.

The integuments of the kidney were not noticed.

The lungs, as seen through the diaphragm, appeared in a natural state.

Case V. August 18. Another girl, whose age somewhat exceeded 5 years, was taken ill in a similar manner ; and retained the symptoms for several weeks ; but finally recovered, and is still a healthy child.

None of these children (for it will be observed that these were all children,) I say not one of them was attended by a practitioner during their attack with measles ; as they lived in the country, and applied for no assistance.

Case VI. About the same time, another female *infant*, for whose original attack of the measles some Glauber's salts had been given, though in an advanced state of them; was seized with dysenteric symptoms; but she was soon relieved by new doses of Glauber's salts. This infant thus imperfectly attended in the measles, resided in a thick settled village.

The *two other cases*, which were of a *pulmonic* nature and succeeded measles, will be spoken of hereafter.—These two patients were *young men*, about twenty years of age.

I shall conclude what respects the *statement* of these cases by three general remarks.—1st. I do not mention all the instances of disease which arose at this period, in our neighbourhood, after ill-cured measles; because I cannot at present be equally certain of the particulars, as in the instances above recited. 2d. I may affirm, that none of those who were gently and early evacuated and bled, experienced a *severe attack of measles*; or any *subsequent* disease, which could be ascribed to measles. 3d. No tendency in general to dysentery manifested itself at this time within our little circle; and, as to pulmonary complaints of a chronic nature, they are at all times somewhat uncommon among us. The two last of these remarks appear to me of considerable importance, as to the question before us.

The first *five cases* recited above, I may now observe, seem to give room for the following *queries*.

Query I. Had *poison*, whether arising from wild plants or other articles, accidentally eaten, any concern in this business?

The answer is easy in the instances before us. Two of the children mentioned in the first six cases, were infants at the breast; and one of them, for the most part, lived separate from the others. The other cases also to which I afterwards referred, were accompanied with circumstances rendering this supposition too improbable for further notice.

Query II. If measles, and especially ill-cured measles, in some cases and some countries, are said to lead to tubercles in the lungs; why may not tubercles on the intestinal tube and its connected membranes, follow also from the same sources in other cases and in other countries?

As this query seems reasonable, it will pass only with this comment. It is by means of these tubercles that we may possibly point out a correspondence between the pulmonic and dysenteric cases above referred to; a correspondence, which will receive further evidence, from the circumstance of the *same treatment* having appeared to succeed in the cure of each.

Query III. If we say that the above patients whose bowels were affected, had *pure and independent* dysentery, how shall we reply to the following difficulties?

1st. Dysenteric symptoms (generally speaking) never occurred with us, as I have mentioned, at this period, unless in cases where measles were concerned. Secondly, in various parts of the world, fluxes often happen in the primary state of measles; as Sydenham, Huxham, Watson, Cullen, and others, have witnessed in Great Britain. Tissot, also has noticed these fluxes in Switzerland; Rhazes (as quoted by Mead) speaks of them in the East; and the author (soon to be mentioned) found them to be a fixed part of the disease in Jamaica. In our neighbourhood, the only variation is, that these dysenteric symptoms occurred after a little interval, and not in immediate and visible connection with the measles. Thirdly, the mortality with us was greater and more rapid, than in common dysenteric cases, where measles have no concern. Fourthly, I am inclined to believe that in proper dysentery, the tubercles which are sometimes found in dissecting the intestines, shew themselves generally *within* the intestinal tube in the first instance; and not *without* it, as with our patients. Fifthly, remedies which are *not* usually employed in dysentery, seem to have had influence, as we shall soon find, over three of our bowel-cases which were desperate. It is true, that we must abate somewhat from this last argument: since it may be thought that the common treatment for malignant dy-

sentery is as yet imperfect; and that the very medicines employed in this case may themselves be of use in future trials with dysentery. Such are the reasons to be urged in favour of the disease having been only a *certain kind* of dysentery; specially connected, in certain situations with measles.

But it is to be urged on the other hand, that in one house, where three of the children had been sick, three men were seized with apparently true dysenteries, while attending them; and another man was seized with the same complaint, who occasionally attended two others of the sick children in a neighbouring house: and it may be added, that if pure *phthisis* and pure *ophthalmia* may follow measles, as their cause; so possibly may pure dysentery.

Perhaps then we may find reason to decide thus between the two opinions. Measles may have left a ready disposition in the children to *receive* true dysentery from the common causes of dysentery; and when dysentery has once occurred, it may have exasperated that *tendency to tubercles*, which every where seems to be a frequent attendant upon measles.

Query IV. Even upon the supposition that measles had their share, (direct or indirect) in the above diseases; it may still be inquired, whether the tubercles which were discovered in the abdomen, *preceded*, or whether they only *accompanied* or *followed*, the new state of inflammation?—In other words, since the pain at the commencement of tubercles or schirrus, is often so small, as not to be noticed; we may ask, whether the tubercles in question existed unobserved, before the occurrence of the new disease? or did they (see cases 1 and 2) begin and ripen within 108 hours, or some shorter period, before death?—The same question attends the *thickening and hardening of the intestines*.

The reasonableness of the suggestions in this query as to the *sudden rise of tubercles*, especially where there was a previous tendency to them; may be made manifest by a statement of two or three facts.

A *sudden swelling* of the glands lying *within our sight or feeling*, is seen in sore throats; and again it is seen in irritations

of the lymphatic system from venereal buboes, and other causes both natural and artificial: and the disappearance of many such swellings is often as abrupt as their appearance.—As to the *internal* examples of sudden swellings of glands or tubercles, take the following produced by Dr. John Hume, formerly a commissioner for the sick and hurt seamen of the British navy; who writes as follows: “Dr. Mackittrick Adair, (of Antigua,) who had practised physic for a number of years in the West Indies, mentioned his having opened a man who died the *third* day of the yellow fever. The whole body, he says, had somewhat of a livid appearance; the cavity of the abdomen seemed dry and destitute of serum; the *omentum* was full of black blood, and had on its lower edge a number of *round glandular bodies* full of the same sort of black blood; the coats of the stomach, duodenum, and ilium, were remarkably inflamed; the liver was not increased in its bulk, though its texture seemed vitiated; the gall bladder was full of black bile; and there were some round worms in the cavity of the intestines; the urinary bladder was a little inflamed; the lungs were sound; and the pericardium contained a *more viscid* yellow serum, and in larger quantities, than common; and the cellular membranes were every where filled with a *tough* clay-coloured *mucilage*.”—Thus then we have discovered *round glandular bodies*, filled with black blood, on the cawl of a man who died on the third day of a fever; that is, before it had raged 72 hours. In this particular instance also, the *viscid* serum and *tough* mucilage may go some way towards explaining the more immediate *cause* of these glandular bodies.

Tubercles have been found repeatedly in the bowels of patients, who have died of dysentery; but they are more frequent in some circumstances or situations than in others: and in some of the dissections made, the thickening, the hardening, and the subsequent softening (by mortification) of the intestines, have also been particularly noticed. Some of the cases thus described had a speedy termination in death, (though less

speedy than with us); but others of the cases had some duration.*

I shall finish what regards the description of our cases, compared with those of the serious epidemic dysentery, by observing that where the *seat* of the tubercles in epidemic dysentery is *particularly noticed*, it is said to be *within* the intestines; and not *without*, as with us. It is also observable, that the patients examined by others were *adults*; whereas ours, who had bowel-affections were children; who (as is well known) are peculiarly liable to swellings of the mesenteric glands.—The *pulmonic* complaints also fell by preference, as was natural, on those arrived at the age of puberty.

Let us now speak of what was done for the relief of our patients.

Treatment of the above Cases.

The *first* of our six cases having in its commencement appeared to belong to proper dysentery; medicines were administered accordingly. But the mother of this patient quickly objecting

* Sir John Pringle has given his dissections in dysentery more at large, perhaps than any other author. They were of adult patients, male and female. (See *Army Diseases*, 7th Edition, p. 237 to 250.)—Dr. Baillie, not finding many cases of tubercles in the intestines in Great Britain, refers chiefly to Pringle. (See *Morbid Anatomy*, 2d. Edition, p. 174-175)—Sir Gilbert Blanc, who superintended several dissections in the West-Indies, yet refers chiefly to the same author. (See *Diseases of Seamen*, 3d. Edition, p. 450-453)—Dr. Donald Monro, thought that the tubercles discovered by Sir John Pringle and Sir G. Baker in their dissections, were uncommon; since in old dysenteries, he himself had seen little besides spots and erosions; appearances, we may add, which with small exceptions, were confined to the *inner* parts of the larger intestines. (See *Edinburgh Essays and Observations, Literary and Physical*, 3. 516-524; where he gives particulars, which he had refrained from inserting in his work on *Military Hospitals*.) He had once observed the mesenteric glands ossified, though not by dysentery. (*London Medical Transactions*, 2. 362-365)—I cannot refer to Dr. Stark; my copy of his work being at present unfortunately missing.

to every thing tending to nausea, and worms being suspected to have some share in the fit ; small doses of calomel were alone continued ; symptoms in other respects being combated as they arose.—The lancet was once employed in the *second case* ; and attempts also were made to obviate inflammation and obstruction, without forgetting the dysenteric symptoms (in the common acceptance of that term.)

The surviving patients however, were still going on unfavourably, when I recollected the little treatise on the measles in *Jamaica*, by Mr. Quier ; to which I alluded in the beginning of this letter. With the consent of a medical friend whom I had a little before called in, the following medicines were adopted out of it, and given every six hours ; namely, castor oil, weakened with a proportion of olive oil ; magnesia, or the testaceous powders, employed discretionally according to the state of the body, but commonly alternately ; gum Arabic ; and an opiate. Clysters also were given on the same plan.—I forget what share calomel had in our prescriptions. The result however was as follows. The *third* and *fifth* patients escaped ; and the life of the *fourth* was prolonged under desperate circumstances. For the *fifth* patient, the lancet was once used ; but I shall perhaps be blamed for not having advised a very liberal employment of it in the whole of the four cases which succeeded the first dissection ; and especially in the beginning of them. Sydenham indeed had advised it in cases of flux accompanying measles ; but our ideas were not yet sufficiently firm as to the connection between the present complaint and measles ; and the fear of the public opinion (where several deaths had occurred) was too considerable, to allow us to vary much ; and especially in an ostensible manner, from the common practice for the cure of dysentery.

The *sixth* case, standing on separate grounds, furnishes no direct evidence as to the new treatment ; but only presents a contrast to the other cases, whether it be considered as proper dysentery, or as a less exasperated state of secondary disease.

It is not only on the cases which are related above, that I have founded my conjecture as to the utility of the foregoing

medicines, when thus combined. For I employed them in the two cases where *pulmonic* affections occurred, subsequent to ill-cured measles; though in one of these cases, the appearances had almost precluded hope. A diet of milk and vegetables was at the same time recommended; but no other medicines concurred in the cure; unless perhaps antimonials and elixir of vitriol, and yet the recovery seemed more regular and *comparatively* more speedy, than in the cases where the intestines alone had suffered.

Conjectures.

How the above medicines operated (if to them is to be attributed any part of the favourable result which occurred,) may seem matter of doubt. For myself, I incline to explain it principally on the footing of a *check being given to acrimony* (and thence perhaps to viscosity;) by means of the oils, the mucilage of the gum, and the absorbent powders.* The laxative qualities of some of these articles, were probably highly useful; yet those who died, it must be observed, also took laxatives; but they were principally laxatives of another nature. Among the *chief* advantages of the opiate perhaps was that, of its admitting larger doses of the oil and magnesia, by checking their purgative qualities.

I am the more inclined to make further experiment of the above method of treatment in future cases, from observing that Dr. Watson (senior) says, that with patients in the worst kind of measles, "a draught of *fresh milk*, either alone or mixed with

* Mr. Quier, in a note to his "Account of the *dry belly-ache* of the West-Indies," probably explains to us a part of his *own* notion of the mode of action of his medicines. Having referred to *De Haen's Ratio Medendi*, he says, "It is a pity, that the *emollient, lubricating, diluting, and enveloping* method so much recommended by this gentleman, is not more followed in all the species of the dry belly-ache." (See *Letters and Essays*, hereafter to be pointed out, p. 182. — Dr. Cullen (in his lectures) asserted, that *even* upon the plan of De Haen, did not answer in trials made in Scotland.

water, was most grateful, and tended much to the alleviation of their complaints, as well as recruiting their strength." Sydenham among his remedies, recommended weak milk and water boiled, and demulcents; milk, demulcents; and an oily linctus made part of the treatment of Mead. Dr. Percival used a demulcent and a neutral salt in his prescriptions; to say nothing of other authorities.

In mentioning these things, we do not mean to reject other aids; as will be seen in particular, when we speak of the diarrhoea in measles.

But to return to the *oil*, let us ask whether oil may not be useful in some shape or other, in cases of *tubercle*, and even of *schirrus*, viewed in a *more extensive* sense?—Olive oil, simmered away very gradually to the consistency of an ointment, and applied *externally to cancer* (as recommended in some of our newspapers;) is said to have had a happy influence over an open devouring cancer in this neighbourhood. May not *oily medicines*, aided by the above named accompaniments, (and in particular by the *mucilage* of the gum and *the removal of coarseness*;) have their turn of trial in an *internal* form, in the case of cancer? And should not many of those *cancer-medicines*, which in modern trials have uniformly failed, cease to be longer administered; as being *proved, in our hands, to be of all others the most hopeless* in general cases?—Should difficulty occur in making the oils sit easy upon certain stomachs, perhaps spermaceti may admit of being used in their stead; though it may be doubted in general how far an increase of the quantity of meat, broth, butter, and other such animal substances, may be useful in cases of schirrus and cancer. What would be the effect of *soap*, which is composed of oil and an alkali; in case it should be sufficiently mild, may deserve a question.

We are told of a *flux from the bowels* occurring to the Southward, which after a year or two, *terminates in consumption*. My information on this subject is not from professional persons; but if such a case occurs, and is owing to tubercles having *extended from the abdomen to the thorax*; may not a treatment be adopted

for it, which shall aim at the cure of tubercles? If this *plan* for the cure be reasonable where every thing else is said to fail, I cannot but hope that the above *methods for executing it*, may be borne in mind; as tubercles in many instances are made worse by mercurial medicines, however they may seem benefited by them in other cases.

May not oils, mucilage, and absorbents, each be principles which may often be introduced with advantage into the human frame (considered as a mass of organized matter); in order to act there nearly under their *original native forms*? Mucilage and absorbents have each been employed in this view; as well as acids, astringents, and certain gasses; and oils perhaps may equally find suitable moments for their adoption. A near relation of mine, who lived on milk and vegetables to avoid the gout, having complained of a grating in the bones on the front of his chest; I recommended to him to make free use of butter with his bread; and the symptom soon disappeared. Would not something of this kind also be worthy of trial for joints which crack when they are moved; especially as I think I have given advice of this sort with success, for this defect? Sinews also which have become rigid by accidents, as well as various other cases, may perhaps afford room for the free introduction either of the oleaginous or mucilaginous principle, or both.—Hence, it may often become useful in practice, where castor oil is employed, occasionally to increase its bulk by the addition of olive oil. But we must at all times remember, that every thing has its limits; and that oil especially may tend to overload the stomach, if not the constitution. But these hints being sufficient in a case, where I have nothing to propose but *loose conjectures*, I resume our general subject.

Of Measles generally considered.

I think it may safely be observed, that there are few instances of diseases like the measles, which are *of such magnitude when neglected*; and yet are commonly to be checked by *such light*

measures in the commencement. A single bleeding and a single purge early administered, and repeated in case of need, with low diet, and pure and temperate air; have, with little or no exception, sufficed in our climate and our situation, for the common form of this distemper. Nor does this method only cure the mild forms of the first disease; but (according to our experience in 1802) it prevents what are far more to be dreaded, namely, the *secondary* complaints. As a purge and a bleeding then cannot injure a common constitution, *neither of them ought ever to be spared*, as far as the cure demands them; which I believe will commonly be found to be within a small extent. Some give a vomit on the first occurrence of measles*; and it perhaps may be useful in various points of view; but I have never seen this method extensively practised; and some have even objected to it.

I shall not pretend to teach at large of the *nature* of measles.† I shall be content with asserting, that at first, the symptoms seem to be *inflammatory*; and that in violent cases they go on to indicate *acrimony*; inasmuch that corrosion often follows the lancet and blister, and (if I remember right) the scratch and even the pustule.

I think we ought not to be so confident, as Dr. Watson appears to have been, that measles of the malignant kind are *putrid*, otherwise than as the result of acrimony; though his recommendation of the Peruvian bark for removing debility, where

* We read of the following general treatment of measles, at Edinburgh, in 1735 and 1736. "Most of the patients who were attended by our physicians and surgeons, were kept on the *cool* regimen all the time of this disease; and were let blood at, and vomited before the eruption; unless, where the preceding symptoms and fever were very mild." Medical Essays and Observations, 5, 27.—(The vomits, it may be recollected, would often act as purgatives.)

† What is the nature of the disease in the *hog*, called the measles?—Is not the animal full of tubercles within; and do not the spots arising from this, occasion him to be called *measly*?—The internal structure of the hog (as we know,) has considerable resemblance to that of man.

the chest is free, may at first sight seem a proof in his favour. I believe however, that his observation is thoroughly just, that *purulent collections* of matter do not occur even in the worst shape of measles. In their more malignant form, every thing tends to corrosion of the flesh, to caries of the adjoining bones, and to ultimate general mortification.

Dr. Percival in the Spring and Summer of 1774, found the measles of the regular kind epidemic at Manchester, and gives the following particulars respecting them. He says, that "it was not unusual for violent peripneumonic symptoms to occur five, six, or even eight days, after the disappearance of the eruption. Under these circumstances, bleeding, blisters, and the seneca root, were found to be very efficacious remedies. I prescribed (he adds) the *Peruvian bark* with great success to many of my patients under the measles, combining it with *demulcents* and the *saline mixture*;" and premising venesection, when the signs of inflammation were urgent. The practice of giving bark in this disease (he affirms) was first introduced by Dr. Cameron, a very eminent physician at Worcester; who observed, that it prevents the *retrocession of the morbid acrimony*, and *continues* the efflorescence on the skin, sometimes so long as the twelfth day. By this salutary operation the cough and other inflammatory symptoms are in a great measure obviated; and the patient is freed from all danger of a peripneumony, the fatality of which Sydenham describes in such strong terms. It is *many years* (continues Dr. Percival) since I first *adopted* the method of cure recommended by Dr. Cameron; and experience has afforded me the fullest conviction of its safety and efficacy, in all ordinary cases. During the late epidemic, not a single instance occurred to me of the peripneumony suc-

* He gave 3 drachms of *salt of tartar* dissolved by the moisture of the air, having afterwards saturated it with lemon juice; also 2 ounces of weak cinnamon-water; half a drachm of paregoric elixir, and the like of antimonial wine; four scruples of extract of Peruvian bark, and the like of extract of *liquorice*; mixing the whole together.—How often this medicine was administered, is not related.

ceeding the measles, *when the bark had been employed*: But my assistance was desired in the last stage of fifteen unfortunate cases of this kind, in which the *common* antiphlogistic and pectoral course had been pursued. The measles, when violent in degree or ill treated, frequently lay the foundation of hectic fevers or pulmonic consumptions.*

Of course we cannot overlook in this account the mention of a demulcent (namely liquorice,) as well as of the neutral salts.—But what is suggested concerning the *Peruvian bark* is of more immediate interest. I do not mean as to the mere *history* of its application to cases of this sort; for here Dr. Percival is mistaken. At the visitation of the measles in Edinburgh, in 1735, and 1736, it is said, that “to those who seemed to be hectic, and to be threatened with a phthisis after this disease; vomits, *Peruvian bark*, and asses milk, were of service.”† Dr. Whytt also employed the bark for *hoarseness* after measles, in 1757, of which we shall soon say more; and Dr. Watson used it more at large in this disease in 1763. But I think you will agree, that it is more useful to notice the supposed power of bark over the *eruption*, and the supposed power of the *eruption* over the *morbid acrimony*; than any other circumstance in the account by Dr. Percival. This, if correctly stated and generally confirmed, may lead us to one mode of controlling both the primary and secondary diseases of measles. It even induces us to ask, in case the

* Medical Observations and Inquiries, London, 5. 283-285. Edition 1776.

† Medical Essays and Observations, Edinburgh, 5. 28. Fifth edition.—In the same volume (p. 84,) we find a paper by the elder Dr. Monro, on the effect of the *Peruvian bark* in gangrenes, agues, and *small pox*; which perhaps shows by what steps the bark first came to be applied to measles; namely, in order to fill the pustules, improve the matter in them, and prevent mortification.

With the same view, Haller, in the case of black pustules in the *small pox*, ordered *camphor*; and his relation of its success, even when the *urine* had become green, forms the most interesting article in the *Pathological Observations* of this author. (See them translated into English, and printed in London for Wilson and Durham, in 1756.) Dr. Cullen, supposes the chief advantage of *camphor*, in *confluent small pox*, to arise from its antiseptic qualities.

morbid matter can be made to *expend itself in some degree* by means of the eruption; whether *severe* cases of the primary disease, which happen in spite of proper treatment, may not occasion the secondary diseases to be less formidable than might otherwise be expected? As also, whether this insidious distemper is not sometimes more particularly to be feared in its milder forms, if neglected or mismanaged. It is next in order to mention again, that Dr. Whytt found it advantageous to use the bark for the *hoarseness* sometimes succeeding measles; whether attended with cough, or otherwise. It was combined with vinegar, though probably without necessity.* The bark, joined with tincture of cantharides and opiates, has likewise often been found serviceable in the *hooping* cough; as opiates with bark and chalybeates, have also been employed successfully in *other* coughs. Of course the *universal rule for all these cases* is, to get rid in as great degree as possible, of the more formidable symptoms of inflammation, before the bark is admitted. The favourable operation of the bark here, is probably not so much owing to its specific powers; as to its stimulating the powers of the constitution, or to its creating counter-actions sufficient to balance the morbid powers of the disease. I must not quit the subject of the bark, without mentioning that Dr. Whytt used the bark for *dysentery-attended with aphthæ*; though he agreed with Cleghorn, that it did no service where mortification had commenced.† This new application of bark has full relation to our general subject; not only because dysenteric symptoms, but (as we shall hereafter find) aphthæ, are frequently combined with measles. After all, the *best* mode of treating measles may perhaps be one, which shall have little to do with bark. Several plans in medicine have in their day met with applause, merely because they were somewhat preferable to those

* *Essays and Observations, Physical and Literary, Edinburgh, Vol. 3. Art. 14. Edition 1771.*

† *Essays and Observations, Physical and Literary; as last cited.*

which went before : and so it may possibly be with those which include the exhibition of bark in measles. The subject therefore merits new attentions. Here however, I shall leave these particulars, to make another reference to Dr. Percival.

This amiable author (now no more) relates from the records of Manchester, in England, that in a period of six years, measles (contrary to small-pox) were found most fatal to *males*. He says also, that in this period, the measles destroyed a number equal to about one *sixth part* of the number destroyed by the small-pox ; and that one half of this loss occurred with patients under *two years of age*.* With respect to the numbers lost however, the Manchester records are probably deceitful ; a part of the slaughter occasioned by measles having been concealed under other names. If we believe Morton, this disease has sometimes become a little plague in its more ostensible shape ; and when comprehended under all its forms (primary and secondary,) it is truly a formidable scourge. Sydenham says of the cough, “ after the measles go off, that it is so very fatal, that it may well be reckoned the chief minister of death ; destroying *even more than the small-pox*.”† Happily some of these accounts surpass modern experience, at least in the United States and in Great Britain.

For the cure of the *diarrhœa* in measles, Sydenham (*as I have suggested above*) chiefly relied upon the lancet ; which, (as is well known,) he boldly used with every patient in every stage of measles which *seemed to require it* : though in common measles, he says, that he generally was able by his methods to proceed without bleeding, in the first stages ; an assertion to which we cannot refuse a certain degree of credit. At Edinburgh, in 1735 and 1736, “ if there was a *diarrhœa* (as we are told),

* Medical Observations and Enquiries, Vol. 5. p. 283, 288, 289.

† See Peachy's Translation, p. 135, 5th Edition ; which happens now to lie before me.

*blood-letting, vomits, and the decoctum album generally put it away.**

Doctor Cullen will afford me some short concluding quotations on the subject of measles.—He says, that “a diarrhoea frequently comes on (after the desquamation of the eruption;) and continues for some time;” also, that “it is common for the measles when they have been of an inflammatory kind, to be followed by inflammatory affections, particularly ophthalmia and phthisis:” and lastly, that “for the *most part*, the measles even when violent, are without any putrid tendency; but in some cases, such a tendency appears.”† My copy of the printed work of Dr. Cullen has marginal notes, made by myself in his lecture-room, in 1780 and 1781, while an attendant upon his lectures: and the notes standing opposite to the above passages respectively, are as follows. “In the *last year’s* course (of lectures) I find, that Dr. Cullen supposed the morbillous matter to have been determined to the mucous glands, (when the flux occurred.)” “If there is an acrid matter, he does not know how to evacuate (or correct) it; and therefore he attends to the inflammatory circumstances.” “As he never saw this putrid tendency, he has always treated the measles as an inflammatory affection.” It appears probable from a review of these three passages and notes, that Dr. Cullen had in his mind Dr. Huxham’s account of a “violent mucous diarrhoea” seen in measles; and as to the putrid form of the measles, he cites for his authority, the celebrated paper of Dr. Watson above noticed. ‡

* See Medical Essays and Observations as above. §. 27. The decoctum album consisted of a decoction of the roots of tormentil and *camfrey*, to which were added cinnamon, calcined hartshorn, pure chalk, and white sugar. (see James.)

† See Dr. Cullen’s first lines of the Practice of Physic, Edition 1779, Vol. 2. p. 80. 81. See also, several passages in his Materia Medica.

‡ See Medical Observations and Inquiries, Vol. 4. p. 132.—In the same volume is Dr. Dickson’s Vindication of Sydenham against Morton and Mead, on the subject of measles. Morton has certainly the bills of mortality and Sydenham’s silence against him; but Morton does not speak upon *hearsay*; but upon the *recollection* of what happened many years before he wrote.

It is needless to insist here on the distinctions between the *benign* and *malignant* species of measles; though the small-pox, the dysentery, the scarlet fever attended with sore throat, and perhaps various other diseases, (even without including the venereal,) have each of them also *two forms*; which differ not only in degree, but in some respects in symptoms; according to constitution, season, treatment, infection, and other circumstances. Nor shall I pretend to detail the respective symptoms or treatment belonging to the two stages (answering to those in the small-pox,) which generally occur in severe, and often in the mild state of *primary* measles; for here common authors must be consulted, subject to what is above observed. But it is proper to notice, that measles even of the same species, under different circumstances, manifest considerable variety; which must not only govern the practice of the physician, but also his judgment of the practice of others. On the whole, one who prescribes for measles should never lose sight of what Sydenham says, after having spoken of *small-pox*: "If this be the true and exact history of the disease, (namely, small-pox,) he deserves to be blind, who will not see that the *whole event* of it, as to *either part*, depends on the foundation of the cure, well or ill laid at first."

This might seem the proper place to say a few words upon *secondary diseases*, as allied to measles. But I shall combine the trifle which I have to note on this subject, with some other corresponding articles, in the division of this letter which immediately follows.

Of connected or corresponding Diseases.

These are of several descriptions.

I. We have already noticed certain disorders which frequently *follow* each other, by a fixed order in nature, in separate individuals; without relation to other patients, and independent

in a great degree on the seasons. Measles we have seen accused, as being the frequent parents of diseases in the chest, eyes, and intestines. Small-pox is thought often to produce scrophula and other diseases; or (to use the words of Haller) their troublesome consequences may be ulcers, inflammation of the eyes, weakness of the joints, loosenesses, or tedious diseases of the lungs. These are the most eminent among the many examples of primary diseases leading to secondary ones. But secondary diseases may sometimes lead to a third class, or to *ternary* diseases; for obstruction or inflammation may occasion schirrus, and schirrus may end in open ulcer; and if the obstruction or inflammation in these cases has been the sequel of some prior acute disease, we shall then have *four* diseases in lineal descent; with three periods of apparent health perhaps interposed.

The several diseases resulting from measles, are not only like the primary complaint itself, commonly either acrid or inflammatory; but, in some cases, they are perhaps the consequence of re-action. The small-pox generates diseases of a more mixed order; but they also are commonly either acrid or inflammatory. Sydenham, speaking on this subject, says, "When the patient is upon the recovery, and the pustules are fallen off and he has eaten flesh a few days, (namely about the one and twentieth day,) I reckon he may be bled in the arm, *if the disease has been violent*; for the *inflammation which the small-pox has impressed upon the blood* (whether the patient be old or young,) no less indicates blood-letting, than the filth that has been gathered together, does purging. This is evident enough, both from the *colour of the blood* that has been taken away after the small-pox has been severe, (which is like that of pleuritics;) and also from those great inflammations that fall on the *eyes* after this disease; as also from *other* ill effects of the blood overheated and depraved by this disease: which is the reason that they who were healthy all their lives before, do (that is many of them,) all their time after contend with *sharp hot* humours falling on the lungs or some other part. But if the pustules have been

few, there will be no need of bleeding. After bleeding, I give three or four purges. Moreover, when the patient has been freed a while from the confluent small-pox, and rises daily, it sometimes so happens that he is cruelly troubled with a *swelling of his legs*; which either goes off of its own accord after bleeding and purging, or is easily assuaged by the use of discutient and emollient herbs boiled in milk."

II. Sydenham, and our own experience have made us acquainted with another form of connection between diseases; I mean that, by which two diseases of *independent origin influence* each other. Thus a departing epidemic acts upon a commencing one, and receives back its re-action; certain symptoms of each being modified by the other. An ordinary disease also has some of its characters changed by a cotemporary epidemic.

If it be said, that a certain state of the air influences in these cases, it must still be admitted that a past disease may have partially changed our bodies for a time; and that infection also, in spreading from one to another, may have *limited* effects upon certain individuals; which are concessions sufficient for our purpose.

III. One *epidemic* in some cases seems to go even to the length of generating others, making them partly cotemporary with itself, though perhaps in different sets of patients; or else the same state of the air or some other unknown circumstance, has the power to produce related diseases.

Of this I shall here offer several examples.—"In the first two months (says Sydenham) that this sort of *measles* (in 1674) appeared, a *measly fever* here and there intervened, in which some pimples broke out in the trunk of the body (especially in the neck and shoulders,) like the measles; but they were distinguished from them, because they did not seize the whole, being confined to those parts we now mentioned. But the fever, though it was plainly of the same kind, was more violent, and continued fourteen days and sometimes longer. It bore neither glyf-

ters nor bleeding, being enraged by both ; but the method for the measles agreed with it.*

At Edinburgh, in 1735 and 1736, we learn that "during the *measly season*, several people who *never had had* the measles, had all the preceding symptoms of measles ; which went off in a few days without any eruption, (which they underwent months or years afterwards.) Others who *had undergone* the measles formerly, had at this time a fever of the erysipelatous kind, with eruptions like to what nettles cause ; and all the previous and concomitant symptoms of measles from the beginning to the end of the disease."†

What is stated as sometimes occurring in seasons when the measles prevail, has its parallel in seasons of the *small-pox*. I begin as before with Sydenham, who writes thus. "At the time (1667) wherein the small-pox first broke out, a new fever arose, not much unlike the small-pox ; if you except the *eruption* of the pustules, and the symptoms which depend upon them. This fever did not seize near so many as the small-pox, yet it continued as long. But in the winter, when *they decreased*, this prevailed ; and when *they returned*, this receded : yet did it never quite cease at these times ; till at length in August, 1669, the small-pox and this fever went off together."—The agreement between this fever and the small-pox chiefly lay in a pain near the pit of the stomach, which manifested itself strongly on pressure ; also in a natural salivation, and natural sweats ; in spots ; and in the mode of treatment being common to both. Hence, Sydenham called the fever *variolous*. Sydenham even informs us, that a *third* disease accompanied these two epidemics, especially during one summer, namely a looseness ; the constitution of the air inclining to a bloody flux : and he adds, that it was manifest, that this disease was nothing else but the fever turned *inwards upon the bowels*. In other words, he suppos-

* See Peachy's Translation of Sydenham. Sect. 5. c. 3. p. 165.

† See Medical Essays and Observations. 5. 22. 29.

ed it owing to an inflammatory tendency conveyed, *through the mesenteric arteries*, to the intestines ; there “soliciting excretions.” It was cured by bleeding, and the cool regimen ; and became mortal (he says) from the use of astringents, and even of rhubarb and other gentle cathartic.*

The following case from Haller is somewhat more equivocal than the preceding ; but I shall give it, that I may have something like a pretext for introducing an *interesting note* from that author. In the Pathological Observations before cited, Haller, after informing us, that at Gottingen the distinct small-pox began in March, which in the summer in many cases became confluent ; says, that in the month of September the disease began to decline, and gradually gave way to a *miliary fever*. He adds afterwards, that this fever “was in no ways dangerous. The disease was very gentle in the first day ; and on the second, large red *spots* appeared upon the skin. It seized equally those who had *not had* the small-pox, and those who had *got over* them. On the third day, very small transparent white *pustules* began to arise gradually in the spots, (the circumference of which was pale ;) but by a moderate perspiration and a diet drink, without any other assistance from physic, all these disappeared on the seventh day ; and were succeeded by broad *dry scales* on the face, back, hands, and even in the mouth and tongue.”†—So far Haller.

* See Peachy's Translation, as above.

† Haller observing, that the small-pox afterwards deceitfully returned with increased violence, and attended with strangury, remarks as follows : “Was there not an *imperfect crisis* by pustules ; and [did not] the acrid matter, being re-forbed and carried to the kidneys, by its stimulus constrict the kidneys ?”—The following curious passage then immediately terminates his paper : “But the variolous pustules dig pits in the skin, so that the turgid arteries discharge a *tinged fluid* through the orifices of the small cutaneous vessels into the bottom of these pits ; and I have seen the pus of *so inflammable* a nature, as to burn *very briskly*. But I never met with pustules in a dead body beyond the pharynx, in any of the viscera. The *firm epidermis* to confine the pus, seems necessary, in order to the formation of the pustules. But the intestines are usually so much affected, as being softened and in a manner macerated in the pus, they are very easily torn even by injection alone.” [N. B. See Cruikshanks as to the seat of the pustule.]

Perhaps it may be worth remembering here, that there are many instances where the infectious matter of the small-pox and kine-pox, applied to persons who have before *passed through those diseases respectively*, has been capable of producing a representation more or less perfect of certain of their symptoms.

IV. Another species of connection between diseases is seen, when disorders *intermix* with each other, in the same patient and in the same moment of time, by a certain alliance.—This may so happen, that one shall appear as the mere symptom of the other; as sore eyes, and cough, and looseness seem to be symptoms of the measles, during the primary disease of measles. Syphilis and gonorrhœa also, if they be really distinct diseases, are also in many cases found blended with each other in the same patient.

V. The last connection, or here I shall rather call it *correspondence*, which I shall mention between diseases; is where one is *vicarious* with respect to another; that is, is of a nature to *represent and perform the offices of the other*. A more brilliant instance cannot be produced, than that of the substitution of the *kine-pox* for the *small-pox*. The kine-pox possesses all those secret influences upon our frame, by which it disables us from receiving the small-pox; in this, exactly imitating the small-pox itself, which almost universally shuts the door against its own return, whenever it retreats from its visitation of any individual; as if it had there destroyed the means and pabulum of its own existence on every future occasion.

And here let me be forgiven for expressing my admiration at the power of vaccination, (under our present notions at least of its efficacy,) in securing us from the small-pox in all its forms. Inoculation of the small-pox had already accomplished wonders of an inferior kind. It had turned the current of the small-pox from the confined vitals, to the *open skin*; where the healing air has access to the parts which are most affected; where the ravages of the disease, if they do occur, are less important, than

when falling upon the vitals; and where the matter of all the pustules has a ready issue.*—But what vaccination proposes to do, is far beyond this; especially as it removes the mortality which inoculation itself spreads, in consequence of its extending the infection in a natural form. The prevention of one serious disease by the infliction of another mild one, which is of itself borrowed from another race of animals, (instead of our retaining that serious disease to multiply its fatal likeness, and to introduce new cases of calamity;) is a singularity hitherto not even looked for in medicine. It may perhaps be considered as a peculiarity on this occasion, little less worthy of notice, that an attempt to extinguish a disease so lucrative to practitioners, as the small-pox, should have excited but little intrigue; that vanity also should have called up only a few opposers; that few real difficulties should have occurred to be solved respecting the progress or the management of the kind-pox; and that the knowledge of the inoculation for this new disease should have spread itself more rapidly over the globe, than any other human invention. Perhaps in the end, we may find, that it is scarcely to be called a human invention; and that men have only been used as instruments respecting it. In the mean time, we are allowed to hope, that it will go on to justify itself as one of the first improvements in medical practice, as well in statistical economy; at the same time that it offers a grateful safeguard to our private feelings. It would indeed be no diminution of the effective value of this measure, should the small-pox itself be supposed heretofore to have had *one and the same origin*

* I do not pretend to say, that the pustules are generally found internally in small-pox; for I know to the contrary; and perhaps pustules may form one of the advantages of inoculation, especially as their discharge is outward. But if the remark of Haller be true, respecting the state of the intestines in the malignant form of small-pox; charcoal, oxygenated air, and other materials, may be given by the mouth and by injections, to meet the variolous matter in the intestines; and a farther proportion of oxygen may be made to enter the system through the lungs.

with the kine-pox ; in short, to be only a more formidable species of kine-pox attended with contagion ; which in our day, is thus exchanged for a gentler form of it. The wonder of the case may cease, but not the blessing. Perhaps so simple a representation of the transaction as this, if generally received, might even extend the blessing ; by reconciling every individual to a belief of the general truth in question, and of the practical advantages to be drawn from it. In the mean time I cannot but remark, that to the British nation and their descendants, are owing the introduction of the *inoculation of the small-pox and the kine-pox* ; and the proper management of the two distempers.

I shall only remark farther on the subject of secondary diseases, that as so many of them are enlisted in the train of the small-pox ; it may be wise, while our opportunities still last for making dissections of the dead in this disease, to pursue our observations on the subject. If the small-pox should finally yield to vaccination, the knowledge obtained may still be useful ; as all discoveries into nature have commonly more than one application.*

* Before dismissing the subject of Sydenham and the small-pox, let me mention, that when Sydenham is praised (as by Haller for example, for teaching the use of fresh air in this disease ; the praise should be measured. He discouraged heating medicines, heating diet, and heated rooms and beds ; but he commonly shut up his patients out of the way of the *open air*, as soon as he discovered the disease. He even put them to bed on the fourth day of the eruption ; though he was somewhat less strict as to the bed in very hot weather, and likewise in the case of slight eruptions or of inflammatory habits. If delirium also occurred, he took the sick a little while from their beds ; and if they had strangury, he had them led twice or thrice across the room, having found this advantageous. But though he knew of many instances where a casual rising from the bed, and of some others where a casual exposure to the air, or the drinking of cold water, had led to cures in desperate circumstances ; yet the benefit obtained in extreme cases by extreme means, did not lead him to try the same or more moderate means in milder cases. But notwithstanding this, Sydenham, for sagacity, candour, courage, and a sense of the true duties of a physician, may serve as an universal model to his profession ; and the extent of his merit may well be learned from this single circumstance, that throughout his life he was under a constant necessity of appealing from his cotemporaries to posterity, in favour of truth.

Of Inoculation for the Measles.

The beautiful practice of inoculation for the small-pox, which was long employed in various parts of the east, before it was even known either in Europe or America; has been imitated for several other diseases in Europe; and, among the rest, for the measles.

It is now nearly half a century, since Dr. Francis Home of Edinburgh proposed this measure for measles. Dr. Percival says, that it was "practised in several instances with considerable success; the soreness of the eyes being mitigated by it, the cough abated, and the fever rendered less severe. Dr. Home's method of communicating the infection was, by applying (to an incision in each arm) cotton moistened with the blood of a patient labouring under the measles. But the morbillous matter (adds Dr. Percival) has since been engrafted, by means of lint, wet with the tears which flow from the eyes in the first stage of this disorder. It is to be lamented (continues Dr. Percival,) that so little attention has been paid to this valuable improvement of the healing art."* Dr. Underwood agrees, that report was favourable to what Dr. Home had done: and says that the practice seemed at one time to have been imitated in Sweden. Dr. Beddoes also appears to think well of it. But Dr. Underwood and Dr. Beddoes seem to admit, that it is now little attended to in Great Britain.†

One reason perhaps of this general neglect is, that measles are chiefly contemplated by some, as only dangerous in their primary form; that by others, the fury of the first disease

* London Medical Observations and Inquiries, 5. 285-286, and Home's Medical Facts and Experiments.

† Underwood on the Diseases of Children. 4th Edition. I. 297, and Medical Abstracts. 4. 239. 4th Edition.

has been easily quelled, and the occurrence of the secondary disease easily prevented; and that measles do not, like the small-pox, permanently deform the human countenance. If there are any stronger reasons than these, for the disuse of the practice, they ought to be made known by those who are possessed of them; otherwise the experiment ought to be resumed.

Of Dissections.

The only solid observations made in this letter, having been founded upon dissections, it would be wrong to quit this subject without observing, that since the benefits to be derived from opening the bodies of those who die of singular diseases, is commonly evident; the privilege of doing it should oftener be solicited. In our town, the indulgence is now seldom refused; as it is never sought but upon critical occasions, and is frequently attended with useful discoveries. When the surviving friends (in addition to the interest they take in the information obtained,) observe decorum, neatness, and a desire to prevent trouble, in the operator; one dissection commonly leads to another, even upon the suggestion of the friends of the deceased. This the more readily happens, as a few persons of consequence have led the way. Dissections have also in general the advantage of calming the friends of the deceased, as to the *necessity of the death which has occurred*; especially where the disease has been treated prudently, and by rule. A man of judgment at the same time will perceive, that the appearances in the dead body, however certainly they may point out the *immediate* cause of death, will have sometimes proceeded from the errors of the practitioner, as well as from the primary disease. This reflection will seldom embarrass a pretender; nor ought it to discourage a man anxious to improve, either himself, or his art, which is so necessary to mankind.

Before I quit this subject, I shall venture to hint, that a little *treatise on the art of dissecting* seems a desideratum in modern times. It is not merely necessary to learn how to prepare the head, the thorax, or the abdomen for dissection; which is all that is taught on this subject by Mr. Benjamin Bell. The young practitioner ought to know (what is not always taught even by anatomists;) I mean, the general size, form, weight, colour, consistence, and habit of each organ, in a *state of health*, according to age and to sex; and all this should appear within the compass of a small number of pages. The practitioner ought to be informed too what diseases are related to each other; what parts have concern in each disease; and under what form each disease operates upon each part. I have seen a dissector ignorant of the most simple things; when the proposed treatise, consulted even while he had the knife in his hand, might have informed him. Much may be learned in the examination of the dead, without delicate skill or profound knowledge; and physicians, apothecaries, and curious persons possessed only of a slight knowledge of anatomy, might soon be qualified to perform many useful *inspections of the dead*. The knowledge of the seats and of the internal effects of diseases, would thus be perfecting itself, by means more extensive than any now employed; and the knife, instead of chiefly instructing the mere anatomist and surgeon, would enlighten the person, who after all, *has most to do with the human body*, namely, the physician.

One chapter ought to be devoted to diseased appearances; as aneurisms, hydatids, polypi, calculi of different kinds, tubercles, schirrus, and cancer. And with respect to cancer, I think the work of Mr. Adams on cancerous breasts deserves consultation, as exhibiting hints which require to be further examined.

Another chapter may be given to an enumeration of the points proper for the dissector to notice, in the written account of his dissections. And here Dr. Stark's mode of *comparing*

the symptoms with the morbid appearances, is much to be commended; and Dr. Baillie likewise has done well in generalizing the accounts of the symptoms. If the method of treatment used could also be given, and given with accuracy and candour, it might safely be recommended.

A third chapter may detail the *preparatory* measures to be taken in every dissection; and they are very few.

A fourth may include the steps necessary to secure the operator from danger in critical cases. It has happened to me, as it doubtless has to you, to have had several of my acquaintance die or become dangerously ill, from the infection conveyed by the puncture of the dissecting knife, or the effluvia from a dead body. As I am not of the profession, but merely *amicus curiæ*, I may with propriety testify, that a zealous practitioner among the sick and dead, runs more hazards to his health and life, than he has credit for; and has therefore to add these to his other claims for remuneration. No professions, however generally speaking, are worse rewarded than those of the medical practitioner, the clergyman, and the school-master, as far as depends on voluntary pay; so careless, in appearance, are we of our bodies and souls, and the improvement of our intellect.

If the plan above recommended were sensibly pursued, I think a few engravings would be added, consisting almost solely of *outlines*.* The parts might first be shewn *in situ*, and afterwards some of them might be given in different sections or layers; and some of them might be exhibited separately, as the intestines; (which might be shewn first in one extended line, with their membranous attachments; and then convoluted; with letters serving for reciprocal references between the

* If more than outlines be given, and colours be rejected, the parts may be distinguished from each other by the interchange of etching, scraping, dots, and lines in the copper-plates.

the physician, the patient, the
nurse, the pharmacist,
the physician's page and the
nurse's page of a first
aid book to be the most
valuable, what parts
of the book each did
write, who ignored
what came, could
have, might have
examined, of the
new edgers and
nurses, only
as qualified to go
knowledge of it
would thus be
now emp
ing the mere
tion, who after
the physician.

One chap
aneurisms,
cies, fibrin

al Transactions of the College of Physi-

to have been a man of some abilities; and on to Sir George Baker and others, as to belly-ache of the West Indies, may be it. At the same time it must be acknowledged prescribed a rash dose of white vitriol practice, which (if there be no error in his hastened the death of his patient. his little treatise on measles annexed to this two particulars much to my purpose. The divides the Jamaica measles universally into two and the *dysenteric*; though with him, the upon the other without the interval which The other particular is, that his patients inflammatory habit of body for some months after and terminated; in which I believe it agrees with all other situations. Whatever differences, however may be found, either in kind or degree, between of Jamaica and other countries, it is proper to be associated with them. Symptoms may be elucidated exhibited in their more striking forms, or even by occasional absence; new general rules may be pointed and old ones may be corrected, by the same means; and (as we have more than once hinted) may thus lead modes of treating certain other diseases.

my own portion of the materials of the present communication, I consider it as offering nothing except as to the curious, which *does not require to be varified*. Much of the letter has indeed professedly consisted of mere queries

It is from the same collection that I obtained Dr. Hume's extract from inaugural Thesis of Dr. Mackittrick Adair, pronounced at Edinburgh in the thesis not to be found among those published by Smellie and Webster.

two.) Indeed I may say here, that in order to aid surgical operations on the living, there are many cases where transverse and other sections of parts, as of the limbs, might very usefully be exhibited,

The two Hunters used to boast, that when they began their lectures in London, there were few towns in England, where practitioners resided, who were able to describe a case, or a dissection; but that as they proceeded, the number of these so increased, that there were few towns where one or more did not reside, capable of managing on these occasions in a respectable manner.

The same progress is now taking place in part of the United States; and the little work proposed, would considerably add to its rapidity.

We may be the more anxious, for some measures on these subjects, as by submitting *select* cases to dissection, we should perpetually obtain fresh knowledge. Upon this principle, I have myself seen no dissection from which I have not learned considerably; for, to use the remark of Sterne, *an ounce of a man's own sense*, is worth a ton of other people's.*

Conclusion.

But it is time, my dear Sir, to resign you to Mr. Quier; whose piece on measles will be found among the "*Letters and Essays, by different practitioners*;" published by Dr. Donald Monro, in 1778. These letters and essays were printed in a thin 8vo. volume for Murray in London, and Elliot in Edinburgh; the chief of them having been originally designed for a third

* Since this letter was written, I have been present at a dissection, the account of which I shall give at the end of Mr. Quier's paper; as furnishing an example of the uses of dissection, and of a case of dependent disease.

volume of the Medical Transactions of the College of Physicians in London.*

Mr. Quier seems to have been a man of some abilities; and his paper in opposition to Sir George Baker and others, as to the origin of the dry belly-ache of the West Indies, may be given in evidence of it. At the same time it must be acknowledged, that Mr. Quier prescribed a rash dose of white vitriol in one case of his practice, which (if there be no error in his account) probably hastened the death of his patient.

With respect to his little treatise on measles annexed to this letter, it contains two particulars much to my purpose. The one is, that he divides the Jamaica measles universally into two states; the *feverish* and the *dysenteric*; though with him, the one state follows upon the other without the interval which occurred with us. The other particular is, that his patients retained an inflammatory habit of body for some months after the measles had terminated; in which I believe it agrees with measles in most other situations. Whatever differences, however, there may be found, either in kind or degree, between the measles of Jamaica and other countries, it is proper to become acquainted with them. Symptoms may be elucidated by being exhibited in their more striking forms, or even by their occasional absence; new general rules may be pointed out, and old ones may be corrected, by the same means; and analogy (as we have more than once hinted) may thus lead to new modes of treating certain other diseases.

As to my own portion of the materials of the present communication, I consider it as offering nothing except as to the dissections, which *does not require to be varified*. Much of the present letter has indeed professedly consisted of mere queries

* It is from the same collection that I obtained Dr. Hume's extract from the Inaugural Thesis of Dr. Mackittrick Adair, pronounced at Edinburgh in 1766; a thesis not to be found among those published by Smellie and Webster.

and conjectures, which may of course prove of a very fugitive nature; but, under the doubting shape which has been given to them, I trust they will do no harm, and may tend to useful inquiry; in which view alone I propose them.

Should any part of what has here been suggested or collected, have the good effect, my dear sir, of exciting you to apply your original and happy turn of thinking, and your extensive experience and reading, to the subjects to which it relates; I shall certainly not regret my trouble. Highly important indeed is the principal object of the inquiry; since you must readily agree, that besides the deaths from the primary state of measles, it is probable that many deaths arise out of the *consequences* of this disease, which are not placed to its account in the ordinary bills of mortality.

I am, my dear sir,

Yours affectionately,

And respectfully,

DR. BENJAMIN RUSH.

An Attempt to explain, why more Children live that are born at the seventh, than at the eighth Month of Pregnancy. By Dr. WILLIAM DEWEES.

IT is an observation as old as Hippocrates, that children born at the eighth month of pregnancy, are not so viable as those born at the seventh. This opinion has almost universally obtained credence, without, as far as I know, any rational explanation being given of it. Hippocrates has attempted it by saying, that at seven months the child naturally makes an effort to deliver itself, in which if it failed, it again attempted at the eighth month, and should it succeed, it came into the world weak and infirm, from having exhausted itself by these efforts. This hypothesis

is scarcely worthy a refutation, since, agreeably to this principle a child at full time, ought to be still more enfeebled, as now it has made three attempts at escape. Nor is the opinion of Pythagoras, that, the number eight, is less fortunate than that of seven or nine, more rational or satisfactory.

Those who have controverted this point, have not been more fortunate than their opponents; since they have rested the whole merit of their defence on a single circumstance of the child, (namely, because it has tarried a month longer in the womb, it must be more perfected, consequently more likely to live) without ever adverting to the contingencies of the uterus or labour at this period of gestation.

I therefore conceive this opinion of Hippocrates just, with this explanation; that a child at eight months is not less viable than the one at seven; but that its chance for life is diminished, owing to particular circumstances influencing the uterus and birth of the child. For agreeably to observation, we find many seven months children reared, but very few of those of eight months. Let us inquire to what circumstances this may be owing. I believe them to be connected only with the uterus, and entirely independent of the child itself.

These circumstances are, first, to a greater power and disposition in the body and fundus of the uterus, to contract and throw off its contents, at the period of seven, than at that of the eighth month; secondly, on the neck of the uterus being at this period more powerfully constrained to relax or yield to these contractions.

That the body and fundus are more disposed, or more violently induced to contract at this time, I infer, from their being now stretched to the greatest limits they can bear with impunity; and when thus stretched are stimulated to contraction: this contraction is manifest to the touch if the finger be introduced through the os tincæ. They have now also, a difficulty to overcome which is essential to the further progress of gestation, which is the resistance the neck makes to developement, and it

is well known the uterus contracts in proportion to the obstacles which oppose it.

Until the seventh month, the body and fundus afford almost exclusively the necessary room for the continually increasing ovum;* this happens from, First, the germ being deposited within their cavity, and consequently acting immediately on their fibres, which it distracts in all directions, but more especially in their longitudinal: Secondly, to these fibres being longer and more lax than those which compose the neck; the former therefore, opposes but little to the ovum, whereas the latter does a great deal. This is a wise provision of nature, otherwise abortion would always take place.

But this disposition to distention has its limits;—and the resistance of the neck cannot be maintained beyond a certain period; this period is when the body and fundus are thoroughly developed, which happens for the most part at the seventh month. These parts now refuse, or cannot, without injury or pain, be stretched any farther; they will consequently contract from the stimulus of distention; the influence of this contraction must be felt somewhere, and this where there is the least resistance; and this will be at the neck of the uterus, which will not only be passive, but open to a certain extent, and over the aperture of the pelvis; while the body and fundus are not only in a state of action, but are defended and supported by the abdominal muscles, &c. This resistance and action of the upper parts of the uterus continuing, and their contents augmenting, constrains the neck to develope, as its resistance is only passive.† By this arrangement the neck of the uterus after the seventh month, is obliged to afford all the room necessary for the future increase of the foetus, &c.

From the balance of power being now in favour of the body and fundus, and this being exerted on the neck; it fol-

* Baudelocque, Denman, &c. † Baudelocque.

lows, it must either yield, or the uterus must rupture; but as the uterus never has been ruptured in this way, we have a right to infer, that there is a disposition in this part to expand when acted upon by them. Now, should this disposition be greater than ordinary, or in other words, should the resistance be inferior to the action it has to counteract, the whole neck will be speedily developed and the fœtus will escape through it without difficulty or danger; and that this disposition, or rather obligation to unfold is greater at this period than at any other, is rendered probable; first, from not only the contractions of the body and fundus being stronger; but being more powerfully felt from their being new, and consequently the parts opposing them more influenced by them; and secondly, from a partial distraction of their fibres having been effected by these efforts, the neck is irritated, and such is the economy of these parts, that when this happens the contractions of the fundus and body are more powerfully and more frequently renewed from sympathy, so that the neck is indirectly concerned in its own distention.

That the power of the fundus and body is greater both positively and relatively at this period, than at any other, I conclude, first (positively) from their fibres being but lately stretched to their greatest extent, and of course their strength not diminished as it afterwards is by the long continuance of this state; and secondly, (relatively) from resistance being now given to the farther developement of the fœtus, they are powerfully stimulated by its continual augmentation, and contract in proportion to the exciting cause.

We need not therefore be surprised that abortions frequently happen at this period; for the neck now is to furnish the whole of the required room for the increasing bulk of the ovum: it is therefore constrained, by the powers just mentioned, to unfold; which if it does in a just proportion, no evil will ensue; but should this not be the case, and it should yield too readily, premature birth will be the consequence.

Therefore should the neck of the uterus withstand the influence of the body and fundus after their first efforts are manifested, the presumption is, it will resist it, to the full period of gestation.

Three causes co-operate to this end; first, the contractile power of the fundus and body will rather be weakened from long distention, and in some measure from their becoming accustomed to its stimulus; secondly, to this stimulus being rather diminished now, since the ovum does not increase as rapidly as formerly, and to more room being allowed for that increase by the augmentation of the neck; and thirdly, to the neck being now less passive; for as it is forced to develope, or augment in width, it becomes incorporated with the body and acts with it, so that when contraction is excited, all the fibres act at one and the same time, and such is the nature of this contraction at the eighth month and at after periods, that it tends to shut the mouth of the uterus; and hence we see at this period very few spontaneous premature births.

For the reasons just assigned, there is no time of gestation at which the uterus yields so unwillingly as at the eighth month; and this emphatically accounts for the observation, that eight months children do not so frequently live as those of seven; for we find that at seven months the mouth of the uterus will yield to the internal agents sometimes very readily, consequently the child does not suffer the evils of a long and protracted labour, nor the influence of external agents: whereas at the eighth month, it almost always requires the concurrence of external causes or violence to throw the uterus into contractions; hence, children of this period seldom live, for they have not only to contend with all the violence that may be offered externally which is capable of producing uterine contraction, but also, with all the accidents that may arise from a severe and protracted labour, as well as to their being ushered into the world before their final uterine developement: we need not wonder therefore so few survive these evils.

A great variety of instances might be adduced to prove the safety and frequency of abortions at the seventh month; Van Sweiten mentions several;* La Motte† also furnishes them; he not only tells us of its happening more than once to the same woman, but also to her daughters, so that with them it appeared constitutional. I myself know a lady who has been delivered five different times at the seventh month or very little more, all of which children, (with one exception) are now living and healthy.

Mauriceau,‡ however, opposes this opinion; he says children born at the seventh month very rarely live beyond 15 days. To reconcile these different sentiments is perhaps not very difficult, as I conceive very much will depend on the opinion the accoucheur or midwife may have, of their chance to live. For it can very readily be imagined that very little attention will be paid, where such strict duties are required, if it is pre-supposed those attentions will be un-availing or thrown away; while on the other hand we can readily believe that many may survive, who have that care bestowed upon them, their delicate frames require. Thus we see of how much importance a preconceived opinion may be, and what different results may follow from the same premises.

It would certainly be erring on the right side to suppose, that all children born alive after the fifth month may, by proper attention be reared; and that we should never remit in our exertions and care towards them, however unpromising our reward may be. We have instances upon record of children at five months being raised to manhood and old age. Thus we are told that Fortunius Licetus§ was an abortion of the fifth month, in consequence of a severe fright his mother received from a

* Comment. § 1310.

† *Traité des Accouch.* liv. I. chap. 28. p. 132.

‡ *Liv. II. chap. 2. p. 204 and 205.*

§ *Baillie Jugem. des Scavants*, tom. V. part. I. p. 239.

form : when he came into the world he was no bigger than the palm of one's hand. His father, a physician, cherished his little body with great care by means of a furnace heated to a proper temperature by artificial means, (after the Egyptian method of hatching eggs,) and also instructed the nurse in the proper mode of nourishing it. He had the good fortune to reap the fruit of his diligent solicitude and care, by his growing up to manhood, and becoming famous for many works of erudition ; he lived to nearly the age of four-score. Another instance may be given not less extraordinary, and of more recent occurrence.* " A foetus at five months of pregnancy was delivered alive, but puny and weak to excess ; it did not cry, and seemed hardly able to breathe ; its eyes were closed, the limbs flabby and relaxed ; some little motion, and the warmth of its body were the only signs of life it exhibited. It was wrapped up in soft linen, and supported by a proper degree of heat ; a little luke-warm milk was given it drop by drop ; this it swallowed ; it continued precisely in this way for four months ; its motions were very inconsiderable, and it uttered no cry ; it voided no excrements. At the expiration of the four months, it began to cry, to void excrements, to move its body, to suck, and to grow like other children ; so that at the end of 16 months, it exceeded in size ordinary children of that age."

These instances prove to us how careful we ought to be in pronouncing weak foetuses not viable. It would indeed be a good rule to treat all such children as though there was a certainty of their living ; nay, this appears an indispensable duty, since we have no right to withhold our attention, however tedious or fatiguing it may be, because many have died who were delivered at this period. The anxious solicitude of some patients has rescued many poor little unfortunates from an untimely grave : if then our affection prompts us to exertions of this kind, humanity and duty ought surely to have equal claim.

* Brouzet. Essai sur l'Education Medic. &c.

I am at this time attending a little creature now a month old, that was born at little more than the sixth month. When it came into the world, the little noise it made did not amount to a cry, but it stirred its little limbs with considerable vigour, and after a few days was enabled to take sufficiently of whey sweetened with loaf sugar, to nourish its feeble frame; it now sucks its mother frequently during the day and night, has regular evacuations, cries audibly, and promises fair to be reared without much more than ordinary trouble.

Thus I have related instances of children living, that were born at the 7th month, and even at a much earlier period; but am not able to give any one, from authors, that was born at the eighth month. What has occurred in my own practice, goes to support what I have already advanced, that children born at the eighth month, more rarely live than those born at the seventh.—I know but of three instances of children living that were born at the eighth month, and these three were from the same lady, who habitually was delivered at this period: her labours came on spontaneously, advanced favourably, and were speedily terminated. All other cases of labour, *that I have seen at this period*, were preceded by more or less of external violence, or frights; the uterus was therefore surprised (if I may use the expression) into contraction, and therefore performed its duties irregularly and with reluctance. The os tincæ now not only yields less willingly, (from whatever cause) but the increased volume of the child, offers more resistance to its passage; the union of these causes protracts the labour to a considerable period, so that the child either perishes before it is born, or else is expelled so very much exhausted, that it survives its birth but a short time.

From what has been said, I think we may safely draw the following conclusions: First, that children born at the seventh month, have, from the contingencies mentioned, a better chance of life than those born at the eighth month. Secondly,

that children born at the eighth month, though more viable strictly speaking, yet from the circumstances of labour at that period, are more exposed to danger than those at the seventh, and hence their diminished chance of life. Thirdly, that of those children born at the eighth month and those of the seventh (*cæteris paribus*,) more of the former would live, than of the latter. Fourthly, but from the nature and physiology of the uterus itself, there ever will be more seven-months children reared, than of eight.

Philadelphia, Jan. 8th, 1805.

*An Account of a Case of Wounded Brain. By JOHN SYNG
DORSEY, M. D.*

Arch street, 20th November 1805.

DEAR SIR,

IN compliance with my promise, I send you a short account of a case of injured brain ; should you think it sufficiently important to be made public ; you will, by assigning to it a place in the Medical Museum, gratify

Your friend and servant,

J. S. DORSEY.

DR. J. R. COXE.

On the 19th October, 1805, I was requested to visit in consultation with Dr. Gardner of Derby, a boy aged about twelve years, who in the morning had received a severe blow from the hoof of a horse. As he was seven miles from the city, I did not

See him, until six hours after the accident had happened. I was informed that he was stunned by the blow, but soon recovering, rose upon his feet and walked ; he had not however proceeded far, before he became sick, and fell. He was taken up and carried into the house, which was but a short distance from the place where the accident occurred. A wound was observed upon the back part of the head, just above the left ear, from which some blood flowed, but the quantity lost was inconsiderable.—When he was put into bed he became sick, and vomited twice.

At six, in the evening, I saw him, and found him free from pain, nausea, and coma : he was lively and did not appear to have suffered much. His pulse was somewhat depressed. Upon examining the head, a wound, an inch and a half long, situated about an inch from the lambdoidal suture anteriorly, exposed to view a large and very deep indentation of the skull—the bone was not thicker than the pasteboard used to cover books, and a considerable portion of it was beat in half an inch below the remaining unbroken portion, so that it was easy to introduce the finger between the skull and dura mater at this part. Notwithstanding all this injury, there was no nausea, no affection of mind, and very little apparent disturbance to the functions of the patient : there seemed, however, no propriety in suffering the bone to remain depressed, as in all probability, it would have occasioned dreadful consequences.

A free incision was made through the scalp, enlarging very considerably the original wound. The posterior and inferior part of the parietal bone was found broken in pieces, and pressed upon the brain. As there was no opening large enough to admit an instrument to remove the depressed pieces, it became necessary to apply the crown of a trephine to the solid part of the skull. It was applied as near as possible to the fracture, and a segment of bone was removed, forming rather more than a semicircle. This opening enabled me to introduce

the levator and to raise the depressed pieces, to their proper level. A fragment of bone very sharp, two-thirds of an inch long, had been forced through the dura mater, and was found imbedded in the brain; a small portion of it projecting upwards, was seized with a pair of forceps; and when it was removed a considerable discharge of blood followed, but a doffel of lint put an end to the hemorrhage: a soft, light poultice was applied, and an abstinence enjoined from all food, excepting toast and water. Dr. Gardner concurred fully in the propriety of copious depletion, and conducted the patient to a complete and speedy cure. The wound healed without difficulty, and the patient now enjoys good health.

The instances of recovery from wounds of the dura mater are sufficiently rare, to warrant us in recording every encouraging case.

Account of two Albinos. By DR. JOHN VAUGHAN.

Wilmington, (Del.) Oct. 26th, 1805.

SIR,

LUSUS NATURÆ, or, the apparent sportings of nature, are not only so afflicting in shape, but so equivocal in kind, as to demand the attention of physicians. Man is not only "fearfully and wonderfully made" in general, but sometimes grievously and *wonderfully* deformed; hence it is our duty to record, and as far as is practicable, to examine, every deviation from the ordinary course of things, in the hope of finally remedying the incidental evils of our nature.

I had for some time attended to the progress of two cases of albinos, that exist in this borough, and was examining into the histories and supposed nature of the deformity, when the

receipt of the second number of the Medical Museum, put an end to the inquiry, by anticipating the opinions of several physiologists on the subject : it, however, may be useful to add these cases to those already published.

The albinos are the children of respectable parents, without any evident deformity or hereditary taint. Their two first children are perfect—the third child and first albino, is now four years of age, and a healthy active boy. The first peculiarity observed in his case, was, what the parents termed “a red streak across the sight of each eye,” but which probably was a shade of redness from the iris ; and in the latter part of the month, this redness disappeared, and a quivering motion of the eyes occurred. It was doubted by the parents, whether the child could see or not, but as he grew it proved to be the common defect of an albino ; and when he began to go about the house, he uniformly shunned the sun-shine, nearly closing the eyes in a clear light, but in cloudy weather and from sun-set until dark he was merry and playful as any of his companions. As he grows his eyes become stronger and their vibratory motions lessen.

The fourth son, and second albino, is now two years of age, and in every respect similar to the preceding. The only apparent defects in the eyes of these children, are their perpetual vibratory motions, and large pupils. The iris is grey, and not, as is more common with albinos, red ; and their complexion is pallid, and hair of a light colour.

The varieties observable in the albino perplex inquiry not a little. The cases mentioned by Mr. Jefferson, are the only ones which I recollect, of a vibratory motion of the eyes. Such was not the case with the famous boys of Chamouni, nor with many others on record ; though in the cases of the subjects of this letter, the motions of the eyes are so rapid and perpetual that an observer might reasonably suppose vision to be altogether precluded.

The “streak” of redness observed in the month, and which disappeared when the vibratory motion of the eyes took place,

is a phenomenon not mentioned in any history, that I have seen. I have supposed it to be owing to a primary shade of redness in the iris, which disappeared when the vibratory motion commenced. This, however, is mere conjecture.

The deformity is, in these cases, evidently accidental. The two previous children were free from any thing of the kind; and from an extensive knowledge of the relatives, there is no reason to suppose an hereditary taint.

If, as Mr. Buzzi supposes, an inordinate appetite for milk, will produce this mal-conformation of the eye, a query arises, whether it be the excessive use of milk during uterine-gestation, or the untoward consequence of inordinate desire, merely? If the former, this would be a common deformity in dairy countries; and if the latter, it will add a new blemish to the *disreputable* catalogue of *nevæ maternæ*! It would have been rational in Mr. Buzzi to impute an unnatural and inexplicable event to any equally unnatural cause; but it is much to be doubted, whether the supposed cause, in this case, bears any sort of relationship to the nature or degree of the event—I cannot but doubt both.

JOHN VAUGHAN.

DR. JOHN REDMAN COXE.

History of a Case of Introsusception. By WILLIAM SHAW, M. D.

Philadelphia, Nov. 1st, 1805.

DEAR SIR,

I HAND you the history of a very singular case of introsusception, which you may give a place in your Museum, if you should think it worthy of publication.

J. A. became a patient of mine some time ago; he had fever with slight paralysis of his lower extremities; for which he was bled and had a mild cathartic given him, and this was repeated on the third day: his diet was ordered to be mild and nutritive. At the end of ten days he appeared so far recovered as to require no more medical assistance.

A few days after he was seized with diarrhœa; he did not make known his complaint until the seventh day. By this time he was very much reduced, but by the operation of a little castor oil followed by a mild astringent medicine, his diarrhœa was stopped about the end of the third or fourth day, when his appetite began to return, and his strength seemingly to increase.

Four days had elapsed when the paralysis of his lower extremities returned, accompanied with sickness at his stomach, which sometimes amounted to vomiting; feeble and irregular pulse, with his countenance very much dejected; he said he felt as if his bowels were turning from one side of his body to the other, and sometimes they seemed to move from below upwards, so as to affect his breathing; all this time he complained of very severe pain. He was ordered a dose of laudanum (it being late in the evening): next morning he died. I opened the body soon after death; the contents of the thorax were in a healthy state: upon opening the abdomen, I found the stomach, duodenum, and about half of the jejunum very much distended with wind, the other part of the jejunum was filled, or nearly so, with more than half of the ilium next to it. At the commencement of this introsusception, a stricture existed which nearly closed the intestine: three other strictures were found in the lower portion of ilium; and at each of those strictures a portion of intestine below, was received into that immediately above, one of about six, one of four, and a third of two inches. The whole of the small intestines showed a high degree of inflammation to have existed before death, and a part of the largest in-

trofusception was already in a gangrenous state. The received portion of intestine was very readily withdrawn from the receiving.

Would not the surgeon be warranted in attempting an operation for the cure of this disease where the symptoms so plainly evinced its existence as in the above case? There can be but two material objections urged against the operation, viz. the fallacy of symptoms in diseases, and the fear of subsequent inflammation from exposure of the contents of the abdomen, during the operation, to the influence of the air. The first ought always to be a serious objection while any doubts remained of the presence of the disease—the second ought not to operate one minute as an objection after the first was removed, and the common means proved ineffectual. We have many instances where, in consequence of wounds, the contents of the abdomen have been exposed for a length of time much greater than would be required for performing the proposed operation, and yet the persons have recovered. One of those dreadful cases, came within my knowledge: the man received a wound in the abdomen by falling on a sharp instrument which passed into the cavity and let out a portion of intestine; he afterwards walked about three miles with the intestine in his hand, and by having the necessary means used, recovered in a reasonable time.

Yours, &c.

WILLIAM SHAW.

DR. JOHN REDMAN COXE.

Account of two Cases of Stricture of the Urethra, removed by Tobacco Bougies. By WILLIAM SHAW, M. D.

Philadelphia, Nov. 1st. 1805.

DEAR SIR,

THE following is the result of two experiments which I made with the nicotiana tabacum in the cure of strictures of the urethra. It is too well known to surgeons, that the disease in question often baffles every attempt to remove it; and I am of opinion that every fact relative to the cure of so painful and so distressing a disease should be made known. If publishing the history of those experiments, should be the means of giving relief in a single instance, I shall feel myself amply rewarded for the time I have spent in copying them from my notes.

T. B. laboured under a stricture of the urethra seated near the prostate gland about nine months. This disease owed its origin to an improperly treated gonorrhœa.

It would be too tedious to relate minutely all the different methods that were employed to remove it: Suffice it to say, that many trials were made with the common bougie; the gum-elastic catheter, &c. blood-letting general and local, blistering on the perinæum, several courses of mercury, all the routine of diuretics, &c. and a spare diet: as a last resource the caustic was proposed by my worthy friend Doctor Physick; but previous to the trial with the caustic, I was induced, from having frequently evidenced the very powerfully relaxing effects of the nicotiana in the cure of spasmodic diseases, to make the following experiment, viz.

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A small-sized bougie was procured, around which I wrapped a thin smooth leaf of strong tobacco, previously moistened with water, so as to enable me to give it a degree of smoothness, that it might with more ease pass into the urethra. My bougie being first moistened in a decoction of tobacco, was very gently introduced into the urethra down to the stricture, where it was kept moderately pressed against it for the space of about fifteen minutes, when it passed the stricture and went into the bladder: at this time my patient complained of sickness at his stomach, and although it was in the coldest season of the year, a considerable moisture appeared on his forehead; immediately after the bougie was withdrawn he discharged upwards of half a pint of urine, which flowed in a natural stream: the bougie was introduced twice afterwards the same day, and repeated daily for two or three days, without the least difficulty: he has continued free from the disease ever since.

The success I met with in the above case, led me to make trial of my bougie, with a small improvement, in a second and very similar case which occurred to me a short time after—This was an elderly man who had by times suffered greatly from a stricture which existed about the commencement of the bulb of the urethra. This case had been treated in every respect similar to the foregoing, and with no better success. I made an extract of nicotiana and covered a small bougie with it, and having rendered it smooth, I moistened it in some of the same extract liquified by the addition of water: I made an attempt to introduce it into the urethra, which succeeded after a few minutes gentle pressure with the point against the membrane, which formed the stricture; a similar sensation of sickness and debility took place in this as in the other case, while the bougie was in the penis; the operation was repeated two or three times after this, which produced such torpor and relaxation of the sphincter vesicæ as to render him incapable of retaining his urine; however,

this inconvenience was removed, by taking a few drops of the tr. canthar. About six months after, I saw my patient, when he informed me that he had remained entirely free from every symptom of the disease, during that time.

Yours, &c.

WILLIAM SHAW.

DR. JOHN REDMAN COXE.

On the Effect of Fear in Dropsy. Communicated to DR. RAMSAY, Charlestown, (S. C.) by PAUL HAMILTON, and transmitted to the Editor, by DR. RAMSAY.

THE following effects of fear on a dropical man, is brought to my recollection, by the perusal of Howard's Essay, on the Hydropic State of Fever—See page 32, of the essay.

In the year 1779, while general Moultrie at the head of the American army was retreating before the British, under general Prevost who then invaded this state, a German named William Spoon, whom I knew well, one of Moultrie's militia, during a small halt which he made at Tulifinny, was placed on sentry: the enemy coming on, Moultrie resumed his retreat, and in the confusion, the officer whose duty it was, neglected to call Spoon off from his post: Spoon remained so much longer than was customary, that he at last determined to return to camp with a friend of his, named Otts, also a German, whom too I knew, and who was a very honest man, much to be depended on: Otts had also been on sentry, and he and Spoon accidentally encountered each other, returning to camp much exasperated at the hardship of having been made to do double duty. To their astonishment, instead of finding their friends they came suddenly upon the British, who then occupied the very ground from which Moultrie had just retreated. Being seen by the enemy, Spoon and his comrade with difficulty effected their escape into the neighbouring swamp, where they concealed themselves,

Spoon had been for some months very dropsical, and it was expected that it would in the end cause his death. They had not long hid themselves when Spoon was seized with an inclination to make water; he was afraid to rise up, lest he should be discovered by the enemy, who they believed was in search of them; he therefore unbuttoned as he lay, and, to use his own words, in a little time he raised a "small creek, for he pissed as broad as a sword."—The swelling of his belly instantaneously fell, he returned home, and was my neighbour in St. Bartholomews parish, for years after, enjoying as much health as most of us, until a pleurisy put an end to him about the year 1798. I had the account from Spoon's own mouth, and it was confirmed to me by his comrade Otts.

August 11th, 1805.

DEAR SIR,

I have thought the above case not uninteresting, I therefore communicate it to you; that it is founded in strict truth I am satisfied, as it was notorious to me, and most of my neighbours, that Spoon was at the above time far gone in a dropsy, and that in a very few days, when, after his separation from it by the above cause, he rejoined the army; he was as lank as a greyhound, and soon became a hearty man.

Yours,

PAUL HAMILTON.

DR. RAMSAY.

Case of Extra-uterine Gestation, by DR. G. CLARK—Communicated to the Editor by DR. DANCER.

Kingston, (Jamaica) August, 1805.

SIR,

THE following case of extra-uterine gestation, is so extraordinary as to seem incredible; were I not well acquainted with Dr. Clarke, the gentleman who communicated it to me, and had I not afterwards had the opportunity of con-

firming the facts stated, by an examination of the woman, previous to her recovery ; I should hardly have ventured on sending it you for publication.

It will seem to confirm the remarks of Dr. Denman in his excellent work,* and to give occasion to many curious inquiries, in which I shall not anticipate others, who may be more consistent in pointing them out.

I am, Sir,

Yours, &c.

THOMAS DANCER.

DR. JOHN REDMAN COXE.

St. Thomas in the Vale.

DEAR SIR,

I HAVE lately witnessed one of the most extraordinary cases that I ever remember to have met with in the annals of midwifery.

On Sunday morning last, a stout-made young Eboe wench, (about 18 or 19) was taken in labour.—The pains, however, were so slight, that she did not call for assistance till the evening. The negro woman who acted as midwife, on examining her, found the vagina impervious, so as not to admit the point of the finger, on account of the pressure occasioned by a large tumor in the perinæum. The anus was considerably dilated, and there flowed from it a quantity of blood and mucus.

In this state she remained, the pains returning at intervals, till half past two o'clock the next day, when I first saw her : she was at this time free of labour pains, had a good pulse, and her strength was not much diminished : the tumor in the perinæum was now very large, and the anus much dilated. On introducing my finger, I plainly felt the hairy scalp denuded : upon inquiry, I was informed, that there had been in the night a dis-

* Introduction to Midwifery, Vol. II. page 425.

charge of water, such as usually happens on the breach of the membranes; but there was not the least appearance of any discharge from the vagina. Having passed no urine since the commencement of her labour, she was much distressed by retention; but I had no catheter with me, and if I had had, I am confident I could not have introduced it, the tumour had so completely shut up the os externum. Thus informed of the situation of the patient, I had no hesitation as to what was to be done: I ordered fomentations and frictions with warm oil; soon after which strong pains came on. I then gradually dilated the sphincter ani, so as that I got my whole hand into the rectum, and succeeding (though with some difficulty) in getting my finger into the child's mouth, I extracted the head per anum; some time after this, by a succeeding pain, the body with the secundines, were delivered without any assistance: there was scarcely any laceration of the sphincter; the perinæum was not in the least injured, and the quantity of blood lost was not more than is usual in natural labour.

The foetus appeared to be of the ordinary size of a seven-months child, (which accorded with the girl's reckoning) and from appearances could not have been long dead; perhaps it died in the beginning of the labour. I shall omit saying any thing as to the medical treatment after delivery, but confine myself to what was particular in the case.

The next day she was free of fever, and the anus was contracted to nearly its natural size; afterwards she complained of great pain and soreness about the parts; she had passed urine, but had had no stools: a clyster was therefore administered, which operated, and she continued to pass what she had passed before from the anus, a discharge resembling that of the lochia. At this time a similar discharge of bloody serum began to flow from the vagina, which, on examination, I found so far dilated as to admit of my finger: I could not however discover the state of the os uteri; and it appeared to me, there had been *no dilatation of the vagina, nor any sign of communication between that and the rectum.*

The former medical treatment was pursued, viz. fomentations, clysters, bark, &c. and on Friday, (she was taken in labour on Sunday,) when I visited her with Dr. Hunter my partner, she was still free of fever: the bark having been neglected to be given, we afterwards found the anus and perinæum in a sloughy mortified state. But on strict examination no communication could be found between the vagina and rectum.

On the ninth day from delivery, the external mortified parts put on a healing appearance. The perinæum had sloughed, and the furca was destroyed, but still interiorly there was no communication between the rectum and vagina.*

The patient recovered, and there are lately some signs of her being again pregnant.

Yours, &c.

GEORGE CLARK.

DR. DANCER.

Cases of Intermittent cured by Calomel. By DANIEL WILSON, M. D.

Richmond, (Virginia) Nov. 3d, 1805.

SIR,

I TAKE the liberty of stating to you in a cursory manner a few cases in which mercury has appeared to be successfully used in the cure of intermittent fevers.

In the autumn of 1803, I prescribed for a lady who lived in the country. Her case was stated to me by her husband, as a long-protracted intermittent of the quartan type. I directed a cathartic of jalap and calomel as introductory to the Peruvian bark. A few days afterwards I received a letter from the husband expressing much uneasiness for his wife. He stated that her mouth was very sore,† and that he was afraid I had made a mistake, and had given mercury to his

* It was in this stage, that Dr. D. saw and examined the patient.

† The cathartic did not operate.

wife. I answered his letter, and prescribed a saline cathartic, together with an astringent gargle: a few days afterwards I saw the gentleman who expressed much satisfaction at the recovery of his wife. He observed to me that as soon as her mouth became affected she never had a return of the ague.

Every physician is ready to bear testimony to the efficacy of mercury in those diseases commonly called bilious, and as a variety of the same disease, I readily concluded that in this instance mercury had cured the intermittent.

Until last December a fair opportunity did not offer by which I might satisfy myself more fully: in that month a poor young man, a journeyman baker, called on me for advice; his case was also a long-protracted quartan. I prescribed mercury for him in such doses as gently to touch his mouth, and had the satisfaction to ascertain that as soon as his mouth became affected, his agues left him. He was extremely reduced by the disease, and had the appearance of a very great predisposition to dropsy. His cure was confirmed by the use of the Peruvian bark.

Within these few days I am favoured with a similar case from a practitioner in the country, which, like my first, was the result of accident. A child under two years of age laboured under an intermittent fever: a cathartic of which calomel composed a part was prescribed, but not operating, a sore mouth was induced, and the child has not had a return of the ague.

These cases stand too much alone to establish a principle in medicine, but I am very fully persuaded that they may be confirmed by further experience.

Should they be found worthy of a place in your Medical Museum, you are very much at liberty to insert them.

Your most obedient humble servant.

DANIEL WILSON.

DR. JOHN REDMAN COPE.

Observations tending to prove the contagious Nature of Yellow Fever.
By THOMAS DANCER, M. D.

Kingston, (Jamaica) June, 1805.

SIR,

I HAVE to thank you for the first number of your Medical Museum, to which I wish success, and should be glad of any opportunity of contributing thereto.

It is my misfortune to differ from the Medical gentlemen of the United States, on the subject of yellow fever. They contend, that it is wholly of local origin, and not propagated by contagion. The reasons which induce me to entertain an opposite opinion, were transmitted to the Editors of the New-York Medical Repository two years ago: not having received any numbers of the above-mentioned work, since that period, I cannot tell whether my paper was deemed worthy of insertion, and I have not at present leisure to detail at length the arguments and facts therein stated. I shall however relate one or two pointed histories, which in my judgment put the matter out of doubt as *it respects the yellow fever of Jamaica.*

History I.

In the month of September, 1803, a fever broke out amongst the soldiers of the 60th regiment, at Up Park camp, (a most healthy situation, in the neighbourhood of Kingston) which carried off 80 men.

That this fever (characterised by all the symptoms of yellow fever,) was contagious, appears from the following circumstances.

- 1st. No local cause existed that could give rise to the disease.
- 2d. It went progressively through the battalion; the persons nearest to those who were sick, being the first that were affected.
- 3d. The medical gentlemen who attended were all taken ill, one of whom died and the rest recovered with difficulty.

4th. The serjeants and orderly men were all affected and several of them died.

5th. But what was most singular, every man employed in shaving the sick fell a victim to the disease.

The above account is attested by Dr. Brown, the surgeon of the regiment, and now surgeon to the Royal Artillery; the circumstances are well known to all the officers and privates of that battalion.

History II.

Extract of a Letter from Dr. Dick of St Thomas, in the East, to Dr. Dancer, Physician in Kingston, Jamaica.

DEAR SIR,

DURING the period of twelve years that I have practised in this neighbourhood, I have had abundant opportunities of seeing patients under yellow fever, and I have always been of opinion, that the disease was contagious; but as a difference of opinion exists among the faculty on this subject, I presume, the following history, which I am about to relate, cannot fail of convincing all such as are open to conviction.

In the harbour of Morant Bay, the yellow fever has lately prevailed in a very alarming degree. The ship in which it at first appeared, was the *Hercules*, Capt Powel, of Bristol; a vessel that was kept remarkably clean and neat, and it was therefore concluded the disease could not have originated on board that ship. It was afterwards found that two of the crew (the first attacked) had been on board another ship, the *Roselle*; lately arrived from Kingston, where she had lost the greatest part of her men by yellow fever. Observing this, I recommended to the masters of the other vessels to prevent their men having any communication with the infected ship *Roselle*. This injunction was attended to by the *London* ships, but nothing could prevent the crews of those belonging to Bristol from visiting their sick

friends on board the *Hercules*; and the consequence was, that many of them were attacked by the disease, and fell a sacrifice to their imprudence.

There being at this time an impress of seamen, the crews of the merchantmen were obliged, for security, to abandon their ships; and those recovering from yellow fever, assembling on shore with the rest, communicated the disease to those who by due precaution, had previously avoided it, and then the disease became *general*.

Capt. Domett, of the ship *Sir Edward Hamilton*, wishing to screen his men from the impress, sent some of them to an estate five miles distant from the harbour. Amongst these, was one of the name of Frederick Bech, who was then recovering from yellow fever: from him Mr. M'Namara one of the persons on the estate caught the infection, and died on the third day of his illness. Mr. Nefs, the manager of the property, and another gentleman, Mr. Slinny, both caught the same fever: the former died on the third day, but the latter fortunately recovered.

Yours, &c.

THOMAS DANCER.

DR. JOHN REDMAN COXE.

Dissection of a Body that died of the Yellow Fever at Philadelphia, in the Autumn of 1805, with practical Observations and Remarks.
By JAMES STUART, M. D.

THE utility and advantages of dissections to the establishment of rational indications of cure in disease, have been so generally and justly admitted, from the very earliest ages of medicine, that it would be, at least, unnecessary, if not intrusive, to insist on them in the present. In it we have only to re-

gret, that indolence, or a want of sufficient leisure should so much have retarded our investigations, that a labour of upwards of two thousand years in the study and practice of medicine, has left the seats of many of the most cruel and fatal maladies incident to humanity entirely unexplored. In no instance is our want of information in pathology more to be lamented, than in the disease which gave rise to the dissection before us. In confirmation of this important truth, the reader is referred to the erroneous opinions formerly received on the source of that *black matter* so frequently vomited up in the last stage of *yellow fever*. Before my observations on the subject *published in May 1798, this discharge was always supposed to originate in the liver.** Nor was it ever before suspected that the qualities of

* Vid. My inaugural Dissertation on the Salutary Effects of Mercury in Malignant Fevers defended before the trustees and medical faculty of the University of Pennsylvania, 22d of May 1798, from page 10, to page 16. To the reasoning found there, had it not been foreign from my subject, two dissections made by me in the year of 1797, might have been added. A part of one of these, as they have never been published, I shall transcribe from my note-book in this place, in the same language with the original.

P. M'G. puerulus quidam biennis, febre biliosa maligna ad quartam diem laboravit, cum ore ejiciebatur evomitionis subnigræ illa species, quam in hoc morbo, *semper symptoma lethiferum observavi*. Coloris intensitas, usque ad diem sextam obnubilavit, quando corpus frigescebat, multa caligine signa mortis densabantur, et die decima mensis Septembris, annoque salutis humani millesimo septingentesimo nonagesimo et septimo, ad auras animam spiravit.

Parietibus abdominis resectis, hepar magnitudinem prope duplam, et in omni parte, *subter costas immediate jacentibus his exceptis*, quæ tinctæ naturali, colorem exhibuit balaustinum. Vesica fellea eminebat repleta cum multa tenuique aquosa bile, quæ, propter coarctationem ducti choledochi communis, non in cavitatem intestini duodeni cogeretur. In tunicis gastricis nempe externis, densa eminenter translucebat inflammatio. Hoc viscere cultro subjecto, in penetrali ejus nil annotabatur præterea mucii viscidii parva copia, quæ, *pietæ multis striis fluctuantibus materiei subnigræ ad visum in paucis differebat ab illa in diebus morbi postremis vomitionis ejecta*. Inflammatorii variis lincis flexuosis villosa inquinabatur tunica, quæ cum interstitiis minus morbidis irregularis reticulati operis pictionem dabant.

Eadem lincæ, illis muco adhærente, sublividæ ad oculos videbantur; atque essent studiose spongia repurgatæ, multo luridiorem exhibebant colorem. Com-

Stuart's Dissection, and Observations on Yellow Fever. 301

the matter discharged, differ in different cases according to the source from which they are derived—that they are *not always fatal*—or, lastly, that the probable issue of the disease may be prefaged from a knowledge of its source. But on the contrary so strongly was the appearance of any black matter from the mouth associated with the death of the patient as a consequence, that, at the sight, as upon an attack of that plague of old, so elegantly described by the immortal Lucretius, he was immediately deserted both by physician and nurse,

—————mussabat tacito medicina timore,
—————ubi quisque videbat,
Implicitum morbo, morti damnatus ut esset,
Deficiens animo mœsto cum corde jacebat
Funera respectans, animum ut mittebat ibidem,

and this perhaps when a more accurate knowledge of pathology might lead to a certain cure.

Such are the reflections which have induced me to take every opportunity to inspect the bodies of those who died with the late epidemic; and these, it is hoped, will be a sufficient apology for the following communication.

On the 23d of September, 1805, I visited Benjamin High, a child of three years old, who had been taken with the usual

pressum manu hoc opus retiforme, subnigro irrorabatur fluido, cujus consistentia, propter copiz exiguitatem, ad sensus non eminebat. Illo iterum deterso, opus reticulatum assumpsit Mutinensem colorem, qui nulli mutationi postea subjiciabatur, &c.*

On the opposite page of my note-book, as a note to this, the following query is proposed.

* His observationibus datis, nonne medicorum opinio, quæ urget materiem nigra vomitionis *letifera* ab hepate originem ducere, lucet erronea? Imo hæc omnia pono, et, ab iisdem morbi vestigiis lucidius patet, illa excretio evenit ex *arteriis gastricis*, quæ in statu sanitatis solebant succum gastricum mucumque secernere.

symptoms of the prevailing epidemic on the nineteenth. In the interim nothing unusual had occurred. His complexion was now fallow; his eyes sunk; his skin cold and cadaverous; although apparently comatose, he kept his head constantly rolling from side to side, and his hands incessantly in motion.

His pulse was scarcely perceptible; when disturbed he uttered a spiteful and malicious scream. On pressing the right hypochondrium he seemed sensible of much pain, which he never failed to evidence by a most piteous cry. About the tip and sides, the tongue was white and moist, and on the middle and posterior part, of a brown or mahogany colour. His bowels had been twice opened by small doses of castor oil, without relief. The stools procured by this were watery and dark-coloured. A mercurial purge, fomentations of brandy and salt, with epispastics to the extremities, and to the right hypochondrium were prescribed. On the morning of the 24th he was warm; the blistering plasters had raised; and his pulse was much more perceptible. The coma was less profound, and he seemed occasionally sensible of surrounding objects. He was ordered small and frequent doses of calomel, with a repetition of the fomentations. In the afternoon, he was not so well.—The medicines were continued as before. On the morning of the 25th, the skin was generally suffused with yellow; he had discharged several black watery stools; was less disposed to sleep, and upon the whole was much better, though it was very remarkable he still continued to agitate his head and hands as before. The same treatment was continued, and porter with water directed for his drink. In the afternoon, there was a slight exacerbation of febrile symptoms.—The porter and water was discontinued. On the 26th he was much the same as on the morning of the preceding day. The porter and fomentations were resumed; the medicines were continued, and he was allowed, now and then, an oyster. In the afternoon he was better. On the 27th, he was rather better; though his stools were

still dark-coloured and of a watery consistence. Warm stimulating fomentations were now directed to be applied to the abdomen and to the blister on the right hypochondrium; and a dose of *ol. ricin.* to be repeated until the stools should change, or until it should pass through the intestines. On the morning of the 28th, at about three o'clock, he suddenly changed for the worse. The blisters were pale and discharged but little; the *cutis vera*, from being suffused in several spots with stagnated blood, assumed the appearance of gangrene. In the evening the symptoms were much the same, except that the heat of the skin was somewhat increased. On the 29th, he was much cooler and apparently insensible. His pulse was altogether imperceptible; although he still continued to swallow whatever was presented to him. The fomentations were repeated, and at proper intervals, tincture of Peruvian bark with strong draughts of brandy and water were prescribed. In the evening his skin was warmer, although he was still without any return of pulse; the other symptoms remained the same. 30th, At about five o'clock this morning he with much tranquillity expired.

On cutting into the integuments of the abdomen, the *cutis* was unusually rigid and dry, and the *adeps* tinged with a yellow colour. The cavity being laid open, the *omentum* was found wound up inwards into a roll; the *liver* was much enlarged and the colour changed for that of an intense orange. The *cystica fellea* was replete with a pale watery bile. The *ductus choledochus communis* was so much contracted as to refuse a passage to the contents of the cyst, even upon the most forcible pressure. The *stomach* was contracted to nearly half its natural size: upon laying open this viscus, the *longitudinal rugæ* of the villous coat were found increased in size, to that of the largest goose-quill. In the cavity nothing was found, except a few ounces of fluid, which most probably was the drink taken in a short time before death. The *villous coat* was uncommonly destitute of mucus, and, (although the vomiting had generally been

very urgent, upon his being roused, a circumstance which should have been noticed in the history of the case,) without the least vestige of inflammation. In the *duodenum*, for two or three inches immediately round the opening of the ductus choledochus communis, a slight degree of inflammation was observed. The remaining tract of intestines was entirely free from this, and void of contents, except mucus and flatus, neither of which last were in any way abundant, while they were as free from any discolouration from bile, or fæces, as though they had been cleanly washed. In the lower portion of the *ilium*, beginning at about two-thirds of its length from the jejunum, were discovered *fix intromissions* of a lower portion of the intestines into that part immediately above. The upper one of these, as may be seen in the annexed engraving, was, in its contracted state nearly five inches long; and if pulled out to its greatest extent, would probably measure not less than twenty. The longest portion intervening between any two of these intromissions, was about a foot and an half, and the shortest about six inches; while the length of the intromissions decreased in a direct ratio with the decrease of distance to the cæcum, until the last, in its convoluted state, did not exceed one inch and an half in length. The *colon* and *rectum* suffered the same changes with the stomach. The urinary bladder was so contracted as to assume nearly a solid form, and was perfectly empty. The *kidnies* and *renal glands* did, in no respect, deviate from those of children of the same age dying of other diseases. The *mesentery* was free from all appearance of disease, except that the glands were somewhat unusually enlarged. The *pancreas* and *spleen* retained their natural state. The time allowed for this dissection did not admit of an examination of the viscera of the thorax and cranium. Nor was this much to be regretted, as the symptoms during life did not warrant a suspicion that such an examination could have thrown the least light on the cause or cure of the disease.

Whether this dissection be considered in a practical point of view, or in respect to the uncommon appearances in the intestines, it will be found equally interesting and important.

As the intussusceptions were the first, as far as I know, that were noticed in malignant fever, it was natural enough to attribute them to some accidental circumstance unconnected with the disease. This I acknowledge I was much inclined to do. But, as a few days afterwards I discovered three of these in another body which died with the same epidemic, and nearly under the same symptoms, and in which the other viscera were in a state similar to those of the first, I am satisfied the derangement under consideration must have depended upon some cause intimately connected with the disease.

If it be considered that bile is a principal agent in digestion and in supporting the peristaltic motion of the intestines—that a supply of this principal agent was always found entirely intercepted, in those cases in which intussusceptions were observed, we shall find no difficulty in referring this cause to a deficiency of bile in the alimentary canal. The intestines, as other parts under similar circumstances, become debilitated by an abstraction of their most congenial and natural stimulus; by this means they are rendered torpid or take on a spasmodic stricture in some parts, while others retaining their usual, or acquiring even a preternaturally vigorous action, crawl over and ingulph them into their cavities.

From this view of the subject, there is reason to conclude, that these intussusceptions have not been peculiar to the epidemic of the present year; but that they are always to be suspected, wherever a foreness of the right hypochondrium, a sense of weight in the hypogastric region, a vomiting, or a discharge of blackish watery matter by stool occurs; and wherever the case is disposed to be unusually protracted without any evident cause.

Upon comparing the symptoms of this case with those of many others, and upon recollecting that I have been frequently requested to examine with the hand, lumps in the abdomens of

my patients in the yellow fever, by them emphatically called "*knots*," I am convinced many similar cases had come under my care before. A very impressive one of this kind occurred last May in the person of Capt. J. C. This gentleman had been about three days ill with a malignant fever, when he complained much of the symptoms enumerated, and requested me to examine several lumps in the abdomen. They were irregular in form and seated in that region occupied by the smaller intestines. They were sore to the touch, but not painful. By copious bleeding and purging, and the application of an epispastic to the abdomen, they disappeared, and the case though very dangerous terminated favourably on the sixth day.

Notwithstanding so much has already been said on this dissection, it cannot be well dismissed without some practical observations on the cure.

The circumstance of the disease not having been disturbed by art before the formation of the third stage, renders this case peculiarly favourable for an undertaking of this kind; but the communication before us being necessarily circumscribed to a few pages only, I shall confine myself to some general observations on the cure, that may serve to prove the correctness of those outlines drawn by an abler hand, and altogether avoid touching shades, except such as may have been left out in former pictures, or such as may seem to be derived from the peculiar light in which the subject is here viewed.

The symptoms of the disease and the appearances on dissection warrant a conclusion, that the inflammation observed in the liver was the primary *topical* affection; that this was the effect of morbid excitement in the whole vascular system; that the stricture on the ductus choledochus communis originated in a relative defect of local stimulus occasioned by a vitiated, and finally a suppressed secretion of bile, which most probably occurred early in the case; that the contraction of the stomach and that of the colon, with the intussusceptions of the smaller intestines, depended upon an abstraction of stimulus in the absence of the same fluid.

From this pathology, it will follow, the cure of the disease in such cases must turn upon three indications.

1. Upon the removal of inflammatory diathesis.
2. Upon obviating the effects of this.
3. And last, upon restoring the strength of the patient.

To answer the first of these, it must be acknowledged, no means more effectual can be employed than blood-letting, purging, and a strict observance of the antiphlogistic regimen. What then must we think of that practice which proscribed bleeding as a deleterious remedy? What shall we say of the feebleness of that practice which, with the greatest caution, employs doses of a few grains of magnesia, or of fifteen grains of cremor tartar with five grains of jalap, to answer the important end of this indication? What are we to think of the practice that employs the stimulating powers of epispastics to subdue the inflammatory stage of this disease? The first are occupied in removing obstacles to the progress of fire, while the last is busied in supplying more of that element to a building already in flames.

Besides the general effects of purges in reducing inflammatory action, &c.—the intimate sympathy existing between the intestines and the biliary system, renders them peculiarly well adapted to remove inflammation of the liver. By their mechanical operation on the *primæ viæ*, by exciting sensation in these, and by accelerating the peristaltic motion, they empty the gall cyst, remove or prevent strictures of the ductus choledochus communis and of the intestines, and obviate intussusceptions of the latter.

If it be admitted that strictures of the ductus choledochus, and strictures and intussusceptions of the intestines, are the consequence of a sudden abstraction of stimulus, in the suppressed secretion and excretion of bile, it is probable purges may act by supplying, in their stimulating powers, a substitute for bile, and hence that these may be rendered more certain and effective by a combination of the INFUSSED BILE of other animals.—I know this proposal will meet its opponents, upon the principle

that bile is an offending fluid in fevers; and that novelty will not be a small obstacle to its being put into practice: but, if it be considered, that an increased secretion of this fluid is the consequence, and not the cause of irregular and febrile action; and that fevers are more tractable in the cases wherein it occurs, we shall rather be encouraged than deterred from taking advantage of this remedy.

Upon these principles, it is conceived, the purges employed in the inflammatory stage of malignant fever may receive a valuable addition in the inspissated bile of other animals. This substance seems more particularly indicated wherever a sense of weight and a soreness in the right hypochondrium, or hypogastric region occur; where white, or black watery stools are discharged; and in all cases, where the disease is disposed to be protracted to an unusual period, without any evident cause.

It was said the second general indication, in this grade of fever, turned upon obviating the effects of inflammatory diathesis.

These are a great prostration of strength, or a cessation of action in that part of the arterial system most remote from the heart, occurring about the third or fourth day of the disease; a consequent congestion, inflammation, gangrene, paralysis, or rupture in some of the viscera; a suppressed secretion of bile, spasmodic strictures of the ductus choledochus communis, and spasmodic strictures and intussusceptions of the alimentary canal.

This prostration of action and retreat of fever to the internal parts, on which the other evils enumerated depend, are rather to be anticipated in the formation, than cured after they have taken place. This is to be attempted by the free and bold use of the remedies proposed under the first indication of cure, in the beginning of the disease, and by the use of mercury so employed as to excite ptyalism as soon as circumstances will admit. But when the inflammatory diathesis has been sufficiently reduced, or the patient shall be threatened with that alarming centripetal state of fever most commonly occurring on the close of the third





Engraved by Lawson for the Philad^a Medical Museum.

or fourth day, every means to excite action in the cutaneous vessels, and to call off the fluids from the vital parts are to be employed. The most powerful of these are found in warm diluent drinks, fomentations of brandy and salt, warm or even hot bricks, sinapisms and blisters to the extremities, and over such parts as may seem to be affected with topical inflammation; ligatures on the extremities, tight enough to obstruct the return of the blood in the veins, are also, as I have had occasion to observe in another place, a most powerful and useful remedy in this stage of disease.*

By the action of these the blood is detained in the external veins, an accumulation in the larger internal arteries is prevented, and, without abstracting strength from the general system, the force of the arterial system is taken off from vital parts.

After saying this much on the remedies to fulfil the first two indications, it might be expected I should add at least a few words on those of the third. But, as these are embraced by the general tonic plan, and, as it was before hinted, the limits of this paper will not admit of any detail of remedies, I shall only observe, the system is here left in a state so extremely excitable, that the use of stimulants and of tonics are to be entered on with the greatest caution; and conclude by referring the reader to such authors as have professedly treated on this subject.

Explanation of the Plate.

a a a. The external receiving portion of the intestine suspended by the mesentery in the position it occupied in the body.

b. b. Two mesenteric glands removed with the intestine.

c. A piece of the mesentery to which the intestine was suspended.

d. The external end of that part of the intestine received, occupying the whole extent of the receiving portion, a a a.

* See the first volume of the Philadelphia Medical Museum.

ee. The received portion immediately at its reception into the portion receiving.

f. The upper end of the intestine where it was cut off.

g. A small protuberance made by two turns of the ligature passed round the intestine.

h. The lower end of the intestine at the part where the ligature is passed.

ii. The ligatures passed round the intestines.

Case of Blindness induced by an Accident of an uncommon Kind—By the EDITOR.

JULY 27th, 1805. My eldest son, John Redman Coxe, aged about six and a half years, playing in the afternoon with a whip he had made of a long piece of the tinsel cord, which serves for children's hat-bands; had the misfortune to strike himself with it in the right eye, and immediately complained of great pain. He would not, or could not open it that I might examine it; and as I considered the pain to be no more than what is usually caused by any severe blow on this organ, I only desired him to bathe it with cold water. After complaining nearly an hour he fell asleep on the parlour floor, for an hour and an half. He awoke with a diminution of pain, but still said he could not open the eye: as, however, he examined with attention, by candle-light, a bat I caught in the house, and did not appear to be in much pain, I hoped a night's rest would remove the complaint. He slept well and rose with little pain, yet still kept the eyelid closed: he now, however, was able to allow it to be examined. The inflammation was apparently small, but on a closer view I perceived a portion of the tinsel cord adhering firmly by one extremity to the inside of the

transparent cornea, and passing directly across the anterior, through the pupil to the inner chamber of the eye. The wound of the cornea was very perceptible, but no vestige of the tinsel was externally visible. An obscure milkiness was already apparent on the crystalline or its capsule, and indicated the misfortune which was to be apprehended, especially as so much time had now elapsed, owing to my ignorance of the injury sustained; for, till this period, I had not any other fear than that a violent inflammation might be the consequence of a blow inflicted by a whip on the orbit of the eye.

As no time was to be lost, I immediately requested the attendance of Dr. Physick, whose constant and extraordinary kindness, I can never forget; and to whom I desire, thus publicly to return my most sincere thanks, for the great obligations I feel myself under, for his skill, and assiduous attention to my son. No doubt could be entertained as to the necessity of removing the extraneous body. The only question was how this was to be best effected. It was proposed to introduce a couching needle, and endeavour to extricate it from the cornea, when after its falling to the bottom of the anterior chamber, it was presumed, an incision of the cornea would allow it to be extracted. The uncertainty of being able to extricate it by this measure, with the certain evacuation of the aqueous humour on withdrawing the needle, and the chance of injury to the iris, together with the difficulty, if not impossibility of incising the cornea, after the collapse occasioned by the loss of the aqueous humour, prevented this plan being pursued. It was ultimately agreed to make a small incision of the cornea, and to pass up a small pair of forceps to extricate the tinsel. Though an injury to the iris was anticipated by its edge, after the evacuation of the aqueous humour, yet this was a trifling consideration to the chance of violent inflammation and suppuration of the eye by longer delay, and no plan appeared more likely to succeed. At half past one, or twenty hours from the ac-

cident, Dr. Physick performed the operation, the eye being fixed with a speculum. After the incision of about the fourth of the cornea, the aqueous humour was largely evacuated; but the forceps, from the confinement they experienced, could not take hold of the tinsel, a circumstance of great anxiety. A silver curette was therefore introduced, and at the second attempt it was dislodged, and brought down to the opening. After a short pause with the lids closed, the tinsel escaped on the globe of the eye, and proved to be nearly one-fourth of an inch in length. The eye was now bound up, his hands secured; and, (having taken thirty drops of laudanum before the operation at two doses,) soon after going to bed, he fell asleep. It may be necessary to remark, that after the escape of the aqueous humour, he complained of great pain of the head, probably from the tinsel then coming more in contact with the iris or crystalline lens. This pain was not very permanent. He had little appetite to-day: at 4 o'clock when he awoke, he eat some melon, but, probably owing to the laudanum taken, soon vomited it up. He complained of but little pain, and soon fell asleep again. He bore the whole operation astonishingly, and doubtless the bystanders felt much more severely than he did. The iris was slightly injured by the tinsel in coming away, but in all probability much less so than it would have been, by any other mode of proceeding.

He slept about five hours, and considerably also during the night.

At 4 A. M. of the 29th, as he was restless, and his skin was hot, I took away about 5 oz. of blood, after which he again slept. He passed much water, but had no stool this day: diet was bread and water: he has no pain of the head or eye, and his spirits are pretty high: he took in the afternoon 6 grains of calomel. He tossed about in his sleep considerably, more from the heat of the weather and his confinement, than from fever. Complains that the light is painful to him, in a dark room.

30. The same; no stool since the operation; restless; bled to 6 oz. and took 3 grains of resin of jalap. Eye sensible to the impression of light.

31. Slept considerably, no pain, bowels not moved: on examining the eye, it was found less inflamed than might have been expected. He sees every object distinctly. He is extremely restless, owing to the activity of his disposition, which renders it very difficult to manage him, the bandages on his arms repeatedly loosening. He slept from 3 till 11 P. M. when he had an opening. He was very restless during the night, and complained much of fiery sparks before the eye.

August 1st, the eye was moderately inflamed; but a slight opacity of the crystalline is evident: in order to check his spirits which render him so unmanageable, it was concluded to give him one-eighth of a grain of emetic tartar, to nauseate him; he took also more resin of jalap. In the evening as the sparks continued, he was bled to 4 oz.—an enema was administered, and a large blister applied to the back of the neck. He rested tolerably and complained but little of the sparks; has had one or two good evacuations.

2d. He was again bled this morning to 6 oz. and slept the greatest part of the day. The blood has never appeared fizy. In the afternoon 4 grains of resin of jalap were given, which operated once. A piece of water melon which he eat sickened him, and caused him to discharge the contents of his stomach. Slept well till 3 A. M. of the

3d. Eye looks favourable, and iris appears more regular. Opacity of crystalline continues, but the external inflammation is almost gone. He has cried much at different times, but it appears not to injure him, the incision having united, and the eye is again prominent from the renewal of the aqueous fluid. He took more of the resin of jalap, which produced two or three evacuations.

4th. Appearances favourable. Eye looks well, and various objects are perceptible, as scissars, money, &c. All yesterday af-

ternoon and during the night he saw the appearance of hay and straw; and the letter A quite red, and as he said, as big as a bed-post; he has no pain, nor is any blood effused to account for the red appearance. These objects he continued to see, as well as sparks, for several days, but they gradually subsided.

5th. The eye appears quite clever, and all inflammation is gone, yet the milkiness of the crystalline continues although he distinguishes objects completely. He has had two or three stools; restlessness from confinement extreme.

7th. The opacity seems to have augmented, he is now obliged to look askance in order to distinguish objects. Another blister ordered to the neck, and five grains of calomel were given with a view to touch the salivary glands.

8th. 4 or 5 stools—eye the same—ordered tartar emetic every hour in nauseating doses.

9th. Could not induce him to take his medicines, and he has grown so suspicious that it is impossible to cheat him; opacity augments, and vision greatly impaired; 3 grains of calomel ordered, and a blister behind the right ear: lowest diet, as toast and water, rusk, and melon, and strict confinement in a dark room continued; the blisters to be kept open with cantharides.

10th. Three grains of calomel were given, and afterwards four grains of resin of jalap.

12th. Mouth is sore; spits considerably, but there is no alteration in the opacity: as there appeared little hopes of the dispersion of the opacity by any means we could propose, it was concluded on the 13th, to heal up the blisters and omit further attempts.

14th. Cannot distinguish any objects, and the eye apparently is insensible to the action of light. Further confinement was deemed unnecessary, and he gradually resumed his former habits.

In a very short time, he appeared to suffer no inconvenience from the loss of the sight of this eye, and now to a stranger, (and even to his friends, at a little distance) no difference in

the appearance of his eye is perceptible. On examining the injured eye, the iris is perceived somewhat elongated, and the crystalline continues of its milky hue. The pupil by exposure to the light, contracts readily.

One important deduction I would wish to draw from this case, is, that we should invariably examine the eye in case of injury as speedily as possible, as future mischief may perhaps be obviated by early attention. I do not apprehend the opacity could have been obviated in the present instance, if even the operation had been instantaneous; as it is probable the tinsel had in the very infliction of the stroke touched the crystalline, and thus laid the foundation of the subsequent opacity.

Philadelphia, November 20th, 1805.

Observations on the Vaccine. By GEORGE FARQUHAR, M. D

Philadelphia, December 17th, 1805.

DEAR SIR,

DURING my visit to Jamaica, in the month of April last, I was fortunate enough to produce the vaccine disease in several white children, although the virus used, had been kept for several months; some part of it having been sent from the Jennerian society in London, and the other, being part of what you had the goodness to favour me with in December last;* and from the above children, before my departure from the island, the disease was diffused among many hundred negroes. It gives me pleasure to mention, that although vaccination has had its opponents in Jamaica, as well as in other countries, it

* This last infection on glass, &c. was, at the time given, several months old.—E.

has now almost become universal throughout the island. One very great cause of the injury the reputation of vaccination has in any part of the world suffered, is, that the disease being so mild as not to require medicine, the attendance of a practitioner is often dispensed with; and the operation entrusted to any individual unacquainted with the characteristic symptoms of kine-pox, and thereby a local affection is induced, not unfrequently mistaken for the genuine constitutional disease; the evils accruing from this circumstance are incalculable.

As the yaws like small-pox, leave the constitution ever after insusceptible of a recurrence of the disease; I was very desirous last summer, while in Jamaica, of ascertaining how far the prophylactic virtues of kine-pock might extend to that loathsome disease; not however having leisure for this, some of my medical friends, at my request, have promised an investigation of the subject; and when I receive the result, I shall feel pleasure in communicating it to you.

With much respect,

I am, dear Sir,

Your obedient servant.

GEORGE FARQUHAR.

DR. JOHN REDMAN COXE.

Case of Superfatation communicated by DR. FARQUHAR.

In the parish of Vere, in the island of Jamaica, in the month of April last, Mrs. B. a lady of great respectability, aged about twenty-five years, was delivered of her fifth child, a daughter; which died in about two weeks after its birth. Between three and four weeks after which, Mrs. B. having been sufficiently recovered to attend to her domestic concerns; was again attacked with the pains of child-birth, and delivered of a very fine healthy boy, who is now alive.

MEDICAL AND PHILOSOPHICAL REGISTER.

FOREIGN AND DOMESTIC.

*On the Inexpediency of erecting Foundling Hospitals.**

"Down then with Foundling Hospitals, more noxious than pestilence and famine."—*Kemper*.

THE attention of the medical philosopher may often be extended with advantage to subjects which seem to lie beyond his province. Thus the application of public charity is worthy of his most serious consideration, and so far as it is intended to relieve physical wants, or to remove moral evils by physical means, his intimate knowledge of the nature and constitution of man eminently qualifies him to direct how it may be most beneficially exercised. In the distribution of private charity, the individual is influenced by motives of humanity, or some momentary impulse, and in this propensity he may safely be indulged; for although ostentation, or the desire of getting rid of clamorous importunities, and removing disgusting impostors, may sometimes induce us to throw away what would have afforded effectual relief to objects more deserving of assistance, yet private charity will seldom be so considerable or promiscuous as to become a public evil. Besides, that attention and sympathy which commonly accompany individual charity, more effect-

* *Edinburgh Medical and Surgical Journal*, No. III.

ually command the gratitude, and improve the morals of the relieved, than the most liberal allowance from a fund on which they have a real or imaginary claim. But public charity requires the most active superintendence, and the most unceasing vigilance, to prevent it from becoming a public burden, and a public nuisance. The delight we experience in indulging the feelings of humanity, the approbation of our fellow-citizens, and the appearance of utility in public institutions, often induce us to squander immense sums, for which no adequate benefit results to the community. As the various and numerous distresses of the poor far exceed any funds which could be collected for their relief, whatever is not applied in the best possible manner is misapplied, and therefore, in their distribution, partial humanity must be totally disregarded, and public utility alone consulted. The first object of charity, in all instances, is to perform the greatest good with the least means; whenever, therefore, a public institution relieves any of the distresses of the poor more effectually and economically than if they were individually assisted, and whenever the relief granted holds forth no temptation to increase the number of those applying for it, or in the most distant way to encourage vice or idleness, then are public institutions truly useful. Of this kind are almost all the institutions for the relief of the diseases and infirmities of the poor. No man will break a limb, because there is an hospital in which it will be set, nor will any man become deranged, because there exists a lunatic asylum for his reception. On the contrary, public institutions, whose objects might be more effectually and economically obtained by individual assistance, are at least hurtful; and when they hold forth a temptation to increase the number of applicants, and to encourage vice and idleness, they become pernicious. On these principles, founding hospitals have been already condemned by enlightened philosophers. "Of all the mischiefs," says Lord Kames, "which have been engendered by over-anxiety about the poor, none have proved more fatal than founding hospitals."

As this opinion directly militates against the appropriation which has been made of a considerable fund towards the erection of a foundling hospital in Edinburgh,* a high degree of local and temporary interest is thus attached to an inquiry into the expediency of the measure. In a medical publication, its effects on population naturally form the principal object of investigation, but these are so intimately connected with its influence on the morality and expenditure of the state, that, in investigating the former, frequent reference must be had to the latter.

The principal intention of foundling hospitals is to preserve and educate, as useful citizens, children which might otherwise perish from neglect or actual violence. Let us examine how far they attain this end. Children are most commonly deserted soon after birth; for maternal affection is not yet confirmed by habit, and at that time only can the hopes of concealment act as a motive; when children, at that tender age, are entrusted to the care of the community, the difficulty of rearing them is immense. What a feeble, helpless being is man at his entrance into this world! Rudely expelled from the womb, in which he received existence, into an ungenial element, his first sensation is pain, his first cry the cry of sufferance: with a frame tender and delicate, and a mind scarcely yet awakened, he is totally incapable of contributing towards his support. Dependent on others for his preservation, the human infant has little chance of surviving, when its numerous wants are not unremittingly supplied by maternal affection. In proof of these assertions, the history of all foundling hospitals may be adduced.

The most ancient establishment of this kind was instituted at Montpellier in 1181, a part of the hospital St. Esprit being ap-

* We, &c. "do finally and unalterably resolve to apply the free income arising from the residue of the said estate, for the pious and charitable purposes of preventing child-murder, and for an hospital within the city of Edinburgh, for receiving, secretly, infant children, and bringing them up to be useful members of society; and by receiving, privately, women big with child, and assisting them in their delivery, so as to conceal their shame, and taking care of their children as foundlings."—Deed of Destination of the Funds of Mr. John Watson, W. S. 13th August, 1764.

pointed for the reception of destitute children. A similar institution was founded at Lyons in 1533. At that time it was the practice throughout Christendom that an exposed child remained the slave and personal property of the person who took it up and reared it. In the 17th century, the number of deserted infants increased considerably; and in Paris they were found in the streets helpless, and left to the mercy of those who chose to lift them. Their miserable fate, about 1638, excited the compassion of a rich widow, who caused them to be brought to her, and reared them in her house. For a time, this, like other undertakings of the same kind, was attended with success; but the most shocking abuses soon crept in. Her servants disposed of these children at a fixed price. Many of them were sold to beggars, who, by dislocating their joints, and otherwise maiming them, endeavoured to increase the profits of their scandalous trade. In 1640, Louis XIII. to correct these and other flagrant abuses, founded the foundling hospital at Paris, the most dreadful scene of butchery, says Girtanner, the world ever saw. Liancourt, in his report to the National Assembly, asserts, that of the children admitted, two-thirds died during the first month, and of these, three-fifths before they were given to nurse. Of 101,000 children admitted in the preceding 16 years, in 1790 only 15,000 remained. Before the 2d of George III. the mortality in the London workhouses was equally great: and Mr. Hanway mentions instances of every child received under a twelvemonth dying within the year. In 1791, Sir John Blaquiere stated to the House of Commons of Ireland, that of 19,420 infants admitted into the foundling hospital of Dublin, during the last ten years, 17,440 were dead or unaccounted for; and that of 2180 admitted during 1790, only 187 were then alive. In 1797, he got a committee of the same house appointed to inquire into the state and management of that institution. They gave in their report on the 8th of May, 1797; by which it appeared that, within the quarter ending the 25th March last, 540 children were received into the hospi-

tal, of whom, in the same space of time, 450 died : that, in the last quarter, the official report of the hospital stated the deaths at three ; while the actual number was found to be 203 : that from the 25th March to 13th April, nineteen days, 116 infants were admitted ; of which number there died 112. Within the last six years there were admitted 12,786 ; died in that time 12,651 ; so that, in six years, only 135 children were saved to the public and to the world. In the Charité of Berlin, where some enjoyed the advantage of being born in the house, and of being suckled by their mothers six weeks, scarcely a fourth part survived one month. Every child born in the Hotel Dieu of Paris was seized with a kind of malignant aphtha, called *le muguet*, and not one survived who remained in the house. At Grenoble, of every 100 received, 25 die during the first year ; at Lyons, 36 ; at La Rochelle, 50 ; at Munich, 57 ; and at Montpellier, even 60. At Cassel, only 10 out of 741 lived 14 years. In Rouen, one in 27 reached manhood, but half of these in so miserable a state, that of 108 only two could be said to be added to the useful population. In Vienna, notwithstanding the princely income of the hospital, scarcely one in 19 is preserved. In Petersburg, under the most admirable management and most vigilant inspection of the Empress Dowager, 1200 die annually out of 3650 received. In Moscow, with every possible advantage, out of 37,607 admitted in the course of 20 years, only 1020 were sent out.

In some of these hospitals it is attempted to rear the children in the hospital itself ; in others they are given out to nurse in the country. Experience has decided in favour of the latter plan : It is less expensive to the state, the mortality is less, the children are more likely to become efficient citizens, and soon become useful to the people to whose care they are intrusted. It has, however, been objected, that it is almost impossible to superintend the treatment of the children, when dispersed so widely ; that there is great danger of spreading the venereal disease in the country, by giving out syphilitic children to nurse ; and that it

will be impossible to find nurses sufficient, where the foundlings are numerous. These objections, however, are not solid; for it will be more easy to find a sufficient number of nurses who will undertake the rearing of a child in their own houses, than who will immure themselves in an hospital; and if, to save the number and expense of nurses, you commit to the care of each, in an hospital, six, five, or even four children, some of whom are generally diseased, you condemn all to a slow and cruel death. The superintendence of their treatment is of little consequence, for it will be insufficient to prevent it, if the nurses feel not some affection for the child, and where they do, it is unnecessary. The propagation of the venereal disease is the most important objection, and is only to be obviated by careful examination and due precautions, until the health of the child be ascertained. Though attended with these and other inconveniences, this method of assisting these helpless beings is to be preferred; and accordingly we find it sanctioned by the British Parliament, which, in 1761, passed an act for obliging all parishes within the bills of mortality to send all children under six years of age, within a fortnight after they were born in or received into the workhouse, to a distance not less than six miles from London, to be nursed until they are six years of age. Dr. Price allows that this act prevented many deaths, and Mr. Howlett reckons, that a diminution of 2100 burials a year has been occasioned by it. Indeed, in nursing hospitals, the mortality is dreadful, the sufferings of the infants extreme.

The causes of mortality, almost necessarily connected with foundling hospitals, are, insufficient and unhealthy nourishment, want of cleanliness, cruelty and inattention of the nurses, confinement, impure air, and want of exercise. But these causes, say the advocates for such hospitals, may be all removed, and the mortality of foundlings reduced as low as that of infants in general. This, however, is merely the speculation of some enthusiastic philanthropists, and never can be realized, unless a nurse can be procured for every child, and some means be found of

imparting to her the feelings of a mother. The difficulty of procuring nurses for the hospitals has been always severely felt; three, four, five, or even six children, are often given to one woman to suckle; the whole are consequently starved and shrivelled; and, should one of them be diseased, the whole are soon infected. At Marseilles, it is the custom to keep those girls, who come to the hospital to be delivered, two years as nurses. Several children are allotted to each of them, but, as long as their own children survive, it is easy to foresee what must become of the others. Besides, the dread of such a task frightens pregnant girls from entering the hospital; and, to this day, the institution has completely failed in its principal object. In England, multitudes of children are brought up on the spoon, but all experiments of that nature in public hospitals have been unsuccessful.

“Who can learn these facts,” says Oslander, “and not be wounded to the soul? who think of a foundling hospital without horror? It seems to be the fate of most of these unhappy foundlings, that while humanity endeavours to rescue them from a violent death, it only collects them to protract their miseries at an enormous expense. If we search the records of foundling hospitals, we can hardly suppress the thought that the curse of the Almighty rests upon their walls, and that they are the abode of the destroying angel.

Children murdered here at the public expense,

was inscribed by a satyrist over the gate of such an hospital. Alas! it is almost true. What a preventive of child-murder, to snatch an infant from the knife, and kill it with slow poison; for what else is the milk of these nurses, and the pestilential vapour of these abodes!”

What then are we to think of the influence of foundling hospitals on population? Are we to ascribe to them the preservation of the few who survive, or are we to accuse them of the

destruction of the multitudes who perish? Are we to accede to the eulogium pronounced on that of Moscow by Mr. Tooke, "That of all the children hitherto brought up in it, not the hundredth part would have been alive but for that institution; and that consequently, even in times of the greatest mortality, it preserves to the state a very considerable number of young citizens;" or are we to acknowledge the justness of the opposite opinion of Mr. Malthus, "that if the children received into these hospitals had been left to the management of their parents, taking the chance of all the difficulties in which they might be involved, a much greater proportion of them would have reached the age of manhood, and have become useful members of the state."

The determination of these questions rests on this single circumstance, Whether or not these children would have been deserted, had no such hospitals existed? Wherever it is considered as a crime, and consequently as a disgrace, in a parent to desert her offspring, it will never be done unless to avoid greater evils; to escape the infamy attached to illegitimate pregnancy, or in consequence of absolute want of the necessaries of life. In the latter case, the crime may be prevented by cautiously extending relief, as in other cases of poverty; but, in the former, the attention of the Legislature must be directed to the root of the evil, to correct the habits of licentiousness from which it proceeds. Penal laws against illegitimate pregnancy will naturally increase the desire of concealment, and the desire of concealment may lead to the desertion, or even murder, of the infant; but by operating as a powerful restraint on licentiousness, they render the original crime less frequent, and probably rather tend to diminish than to increase its eventual effects. All children deserted in defiance of such laws, or who become destitute by the death or total incapacity of their parents, have a right to the protection of the public; and as many of them as are thereby preserved, constitute an actual addition to the population of the state. But institutions for maintaining them under these cir-

circumstances have no direct tendency to prevent child-murder, and should not be confounded with foundling hospitals, properly so called, which authorize and facilitate the desertion of children, with the intention of preventing child-murder. Now, what are the motives which lead to this unnatural crime? Are they not the desire of concealing illegitimate pregnancy, or of escaping the labour of rearing the infant? So far as the latter motive is concerned, foundling hospitals operate as a direct tax on industry and virtue, and as a direct encouragement to idleness and vice; but if child-murder proceeded only from the former motive, foundling hospitals would have little effect in preventing it. For illegitimate pregnancy must either be infamous or not; in the one case, the same endeavours to conceal it would be used as if no hospital existed, and, in the other, there would be no desire of concealment, consequently no child-murder, from that motive.

But, for the sake of prosecuting our inquiries, let us admit that foundling hospitals are as complete a preventive of child-murder as their advocates suppose; it is evident, that so long as illegitimate pregnancy is considered as disgraceful, so long as the desertion of children is considered as infamous, they will have no effect, unless the admission into them be secret, indiscriminate, and unlimited. Suppose it limited, the hospital full, and the basket removed, what will be the consequence? The desertion of children having, till that moment, been authorized, they will be brought as before, deposited on the street instead of the basket, and the hospital must admit them, if they be discovered before they have died of cold and hunger. If the admission be not indiscriminate, the concealment cannot be perfect; and to what class of women shall its benefits be confined? To the worthless? Certainly not. To the unfortunate victims of seduction? If it could prevent child-murder, yes. In London, in order to the reception of the child, the previous good character, the present necessity of the mother, and the desertion of the father, must be inquired into, and whether it will be attend-

ed with the consequence of her being replaced in a course of virtue, and in a way of obtaining an honest livelihood.* Such restrictions are laudable, but they completely exclude those most likely to maintain their reputation at the expense of so enormous a crime.

Wherever the reception is indiscriminate, their effects are pernicious to the morals and happiness of the people, they oppress the industrious by their expense, and they diminish population. The evils they necessarily produce are infinitely worse than those which they are intended to obviate. The dread of illegitimate pregnancy, and its consequences, in the present state of society, is one of the most powerful safeguards of female chastity. Foundling hospitals, by removing in a great measure the fear of these, directly encourage licentiousness, and when pregnancy is the consequence, the infant is almost of course sent to the hospital, and the mother deprived of the best means of atoning for her imprudence, and showing the sincerity of her repentance; means which seldom fail of restoring her reputation, and of ensuring to her, in her old age, the gratitude and protection of the child, whose preservation she accomplished, even at the risk of perpetuating her shame.

But the effects of indiscriminate admission on the morals of the married poor are, perhaps, still more to be dreaded. When we consider the dangers to which the birth of a child exposes the mother, the pains it inflicts, the exertions its maintenance requires from her yet enfeebled frame, the anxiety of mind, numerous inconveniences, deprivations of enjoyment, and augmentation of labour, which, among the lower orders of society, are necessarily connected with its continuance in life, we must immediately be aware of the danger of diminishing the necessity of submitting to these temporary inconveniences and increase of labour. Sir F. Eden, who has investigated the situa-

* Account of the Foundling Hospital, page 62.

tion of the poor with particular attention, observes, that "the terror, which poor-houses and work-houses create, operates more in preventing grown people from entering them themselves, than from consigning the younger part of their family thither. It is perhaps not an unnatural course for a mother to abandon her child to the parish officers, who, she is assured, will provide for it, for some years at least, better than she possibly could; more particularly when that child is the fruit of an illicit amour, and when, by leaving it at the workhouse, she can often screen her character from detection. Considered in this point of view," he concludes, "the poor laws may be said to offer an encouragement to debauchery."

Foundling hospitals, in this way, tend to loosen the ties between parent and child, the chief source of happiness and virtue among the poor, and by holding forth temptations to the idle and indolent, too powerful for their resistance, seduce many of them to deprive themselves for ever of the greatest consolations of their lives, and of the support of their old age and infirmities; the community thus drawing on itself the support of the parents as well as of the children. "At every occasional pinch for food, away goes a child to the hospital, and parental affection among the lower sort turns so languid, that many who are in no pinch relieve themselves of trouble by the same means."—And many a one, whose last moments might have been honoured by the tears of a virtuous family, is left to perish unheeded in a work-house cell. "An occasional child-murder, from false shame, is saved at a very high price, if it can only be done by the sacrifice of some of the best and most useful feelings of the human heart, in a great part of the nation."

But these arguments, it may be said, are merely the opinions of speculative philosophers: let us then bring them to the test of experience. In *Peterburgh*, the annual births are about 17,550, of whom 3650 go to the hospital. In the district of *Moscow*, the total births may be about 49,629, and in 20 years from the

institution of the hospital, 37,607 had been admitted into it. In Lyons, in the year 1772—5320 children were born, of whom 977 were sent to the foundling hospital. In the same year, the births at Paris amounted to 18,713, of whom 7676 were abandoned to the hospital; and of these, Buffon clearly proves that more than one half were legitimate children. It is also to be remarked, that there is a constant increase of the proportion of children deserted. In Paris, the number of foundlings in 1670, 1680, 1700, 1740, 1749, 50, 51, 52, 53, 54, 55, 64, 65, 1772, and 1776, was 312, 890, 1740, 3130, 3775, 3785, 3783, 4127, 4329, 4231, 4273, 5560, 5495, 7676, and 6419, respectively. In London, in consequence of the indiscriminate admission of children not exceeding two months being sanctioned, “on the 2d of June, 1756, the first day of general reception, 117 children were received. From that time to the 31st December, 1757, 5510 children were admitted into the hospital;” and the admission would probably, according to Sir F. Eden, have soon consisted of half the children born within 100 miles of the metropolis, but for the act of 1760.

These facts indisputably prove, that foundling hospitals increase the number of deserted children; and as the mortality among foundlings is greater than among other children, we cannot refuse our assent to the position of Mr. Malthus, that “if a person wished to check population, and were not solicitous about the means, he could not propose a more effectual measure than the establishment of a sufficient number of foundling hospitals, unlimited in their reception of children.”* Of those who

* It must, however, be remarked, that foundling hospitals only diminish the actual population *directly*, by increasing the comparative mortality of the children who are born; *indirectly*, they probably tend to augment the actual population by removing one of its greatest checks, the care of providing for our offspring. But this view of the subject is the most fatal of any to the opinions of those who think foundling hospitals deserving of support, as a means of preventing child-murder; for, in this way, they operate upon the same principle as the permission of child-murder, from which it only differs in the enormous expense, and protracted cruelty with which they are attended.

survive the hardships to which they are exposed in such places, the greater part are incapable, from bodily infirmity, to support themselves; and, with regard to their morals, Arthur Young has observed, that "foundling hospitals encourage that vicious species of procreation which does not deserve the name of population; that the encouragement afforded by foundling hospitals is an encouragement of vice and inhumanity, and a public premium given to the banishment of the best feelings of humanity."

Another serious evil to be adverted to is, that, after they have been found by experience to be injurious, it is extremely difficult to put a stop to the evils they have introduced. The habit of deserting children, having been once allowed, is slowly renounced by those whose morals it corrupted, and whose industry it has suppressed. On the 9th of February, 1760, a committee of the House of Commons, appointed to inquire into the effect of the indiscriminate admission of foundlings,

"Resolved, That it is the opinion of this committee, that the general admission of all children indiscriminately, under a certain age, into the hospital for the maintenance and education of exposed and deserted young children, to be maintained there at the public expense, has been attended with many evil consequences, and ought to be prevented.

"Resolved, That it is the opinion of this committee, that no children should be received into the hospital for the maintenance and education of deserted young children after 25th March next, to be maintained there at the public expense."

There were at this time above 6000 children on the establishment, almost all of them under five years of age; and, notwithstanding the strong resolutions of the Commons, "six years passed before the number was reduced so low as 4300; and it was not till after the year 1769, that, by apprenticing all who could be placed out, they were reduced below 1000.*"

* Account of the Foundling Hospital, p. 33.

If the facts and arguments already adduced be at all conclusive with regard to the injurious effects of foundling hospitals on the population and the morals of the people, it may appear superfluous to have recourse to any financial argument; but probably few of the advocates for foundling hospitals are at all aware of their enormous expenditure, or how many extensive and unequivocally useful charities it would be sufficient to support.

The foundling hospital at London, from its commencement to December, 1757, placed out only 105 persons to do for themselves, in return for an expense of 166,000*l.* being 157*l.* each person! In 1760 it required an income of above 45,000*l.* for its support; and its total expense for the ten years preceding 1770 could not be less than 525,000*l.* of which 495,000*l.* were granted by Parliament. In 1753 its income was only 1050*l.* and its expenses 5000*l.* Besides a tax of 1*s.* 4*d.* a pound on the rent of houses in Dublin, the Irish Parliament has at different times granted 158,696*l.* towards the payment of the debts of the foundling hospital in Dublin. From a foundling hospital in a respectable German principality, after twenty years perseverance, only one foundling reached the years of manhood, at an expense to the state of 20,000 dollars; a greater sum, says Gistanner, than would have been sufficient for the education of its hereditary prince. The current expenses of the Petersburg hospital are, according to Malthus, 150,000*l.* annually.

From this inquiry it evidently appears, that foundling hospitals are hurtful in every point of view, whether we consider their effects on the morals, population, or expenditure of the state; and that, whatever objections may exist to the abolition of those already established, the Legislature, consistently with their resolutions of 1760, ought not to permit ostentatious or mistaken charity to introduce into any part of these kingdoms an evil of such magnitude.

*An Account of the Discovery of the Composition of Muriatic Acid.
By PROFESSOR PACCHIONI, of Pisa. In a letter from FABBRONI
of Florence.*

“ A BRILLIANT discovery has been made by one of my friends. I have enclosed an account of it, which you will transmit to my respectable and dear friend Kirwan, after having communicated it to the philosophers of your country through the medium of your Journal.” We therefore gladly take this means, though somewhat irregular, of complying with his request, and of giving to our readers the earliest possible notice of the discovery alluded to, by translating the pamphlet in which it is announced.

*Lettera del Dottor FRANCESCO PACCHIONI, Professore di Fisica
nell' Università di Pisa, al chiarissimo Sig. Auditore LORENZO
PIGNOTTI, Consultore et Ispirografo Regio.*

“ To you, my much respected friend, both on account of the spontaneous impulse of innate kindness with which you deigned to take so much care of my talents, such as they are, as to receive me among the number of your pupils, and on account of your having paved the way for my obtaining that very chair which was filled by you for many years with so much applause and honour to our country, rather than to any other person, shall I give an account of a discovery which I have made and satisfactorily verified. But these are not the only reasons by which my conduct is influenced. I wish, at the same time, to show my gratitude towards you, and to give you a proof that I am endeavouring to render myself more worthy of your esteem and friendship.

“ It is perfectly known to you that, since last year, on account of the premiums proposed by that excellent general and philosopher Bonaparte, Emperor of the French, for the advancement of that new and fertile branch of experimental philosophy dis-

covered by the celebrated Professor of Bologna, Galvani, and afterwards wonderfully extended by the sublime genius of Volta, I have contrived a great number of experiments, which I have performed with much care, and almost completed. These experiments have revealed to me many facts, which I am collecting for a memoir to be presented to the *Società Italiana*, and have led me to a knowledge of the constituent elements of an acid which has hitherto proved refractory to all the efforts of chemistry. I speak of the muriatic acid, hitherto tortured in vain* with the electric spark, caloric, and all the play of affinity. You are perfectly acquainted with the different and discordant opinions of the most recent and approved writers concerning the nature of this acid; some of them considering it as a simple combustible body, others as formed of an unknown base combined with oxygen, and, lastly, others as a simple substance naturally acid. But these opinions have not contributed to the advancement of science, and are justly esteemed as mere hypotheses destitute of proof.

Having, however, neglected these hypotheses, and considered the means by which the discovery of the nature of this acid has been hitherto attempted, it appeared to me that one had not yet been tried, viz. the continued action of the pile of the celebrated Volta, and I suspected that it might assist in leading me to discoveries which had hitherto escaped the research of experimental philosophers. As far as I can judge, my endeavours have been crowned with success, and have furnished me with satisfactory evidence of the nature of the constituent principles of muriatic acid.

The simplicity of the apparatus, and of the means adopted to attain my views, the care with which I endeavoured to avoid

* Prof. Pacchioni could not possibly know that his discoveries had been in some measure anticipated by Mr. Peel at Cambridge.

every source of error, have, I hope, sufficiently secured me against those illusions which frequently deceive young men ardent in the pursuit of science, and even those practised in the art of extorting from nature her secrets. Want of time prevents me from relating the series of experiments by which I arrived at the discovery I have mentioned; but you may see it by perusing the manuscript of my memoir, which will be immediately published, to submit my researches and their results to the judgment of the learned. For the present, I shall select from the experiments and facts therein described those which are decisive, and which establish, in an evident manner, the following truths:

I. *Muriatic acid is an oxide of hydrogen, and consequently composed of hydrogen and oxygen.*

II. *In the oxygenated muriatic acid, and therefore, a fortiori, in muriatic acid, there is a much less proportion of oxygen than in water.*

III. *Hydrogen is susceptible of very many and different degrees of oxidation, contrary to what is universally believed by pneumatic chemists, who assert that hydrogen is susceptible only of one invariable degree of oxidation, that in which it forms water.*

Having at first examined the phenomenon of the decomposition of water by the Galvanic pile, and having, by accurate experiments, ascertained the true theory, I readily discovered a very simple and exact apparatus, in which I could distinctly perceive the changes which happen to water, which, from the continued action of the Galvanic pile, is continually losing its oxygen at the surface of a wire of very pure gold immersed in it.

I therefore proceeded to examine these gradual changes of water thus losing its oxygen, and I at last observed a very singular fact, which unequivocally indicated the formation of an acid. In other antecedent experiments, I had examined the nature of the air obtained before arriving at this remarkable point, and I always found, by means of the eudiometer of Giobert, that it

was very pure oxygen,* as the residuum scarcely amounted to one sixtieth.

Having thus examined the nature of the air formed in various experiments from the first moment of decomposition, until there were evident indications of the formation of an acid, I began to endeavour to determine, in a more positive manner, the existence and nature of this acid.

When the water, or to speak more accurately, the residual fluid, occupied about half the capacity of the receiver, which at first contained the water, this residual fluid presented the following characters.

Its colour was an orange yellow, more or less deep, according as the bulk of the residual liquor was greater or less, and it resembled in appearance a true solution of gold.

From the inferior orifice of the vessel, which was closed with a piece of taffety; and then with double bladder, there escaped a *smell* which was easily recognised to be that of oxygenated muriatic acid.

The gold wire had in part lost its metallic lustre, and its surface appeared as if corroded by a solvent.

The bit of taffety which had been in contact with the coloured fluid, in consequence of its action, was easily torn, as is usual with similar bodies when half-burnt (semicom busto.)

Around the edges of the vessel, on the bladder, there was formed a deep purple ring, which surrounded a circular space rendered entirely colourless, or white.

A drop of this fluid tinged the skin of the hand, after some hours, with a beautiful rose colour.

Having obtained, in various successive experiments, the same liquid, possessing constantly the same properties, I chose that ob-

* In all experiments we are acquainted with, hydrogen gas was always evolved; but as we have no information concerning the arrangement of Prof. Pacchioni's apparatus, we cannot adduce this fact as conclusive against the accuracy of his experiments.—*Edinb. Editor.*

ained in the last experiment to subject it to chemical examination. The very able chemist of this university, Sig. Giuseppe Branchi, had the goodness to enter zealously into my views, and in his laboratory we easily proved,

1. The existence of a volatile acid by the white vapours, which were formed by ammonia placed near it.

2. That this acid was certainly oxygenated muriatic acid, since it formed in nitrate of silver a curdy precipitate, the luna cornea of the ancients, or the muriate of silver of the moderns. From these facts we may draw the following positive and undeniable results :

1. Muriatic acid is an oxide of hydrogen, and is therefore composed of hydrogen and oxygen.

2. Oxygenated muriatic acid, and of course muriatic acid, contains less oxygen than water does.

3. Hydrogen has not one degree of oxygenation, but many. One of these constitutes water, another below it oxygenated muriatic acid, and, below this, there is another which constitutes muriatic acid.

I shall mention the other degrees in another memoir, which will be published immediately.

These, my much esteemed friend, are the decisive facts and experiments which exclude every doubt, and which confirm my fortunate conjectures. It is long since experimental philosophy may be said to have become a source of wonders. The transmutation of azote into nitrous acid, and of hydrogen into water, appear to me truly wonderful, and your genius will enable you readily to judge whether the same epithet may be applied to the metamorphosis of water into the true solvent of gold and platinum, into that volatile substance which attacks and neutralizes pestilential miasmata, and presents so many resources to philosophy and the arts.

After having thus discovered the elements of this refractory substance, I am engaged in determining their proportions by experiment and calculation.

To me it appears that the origin and nature of muriatic acid being now known, there is no longer any mystery in its formation, nor in that of the muriatic salts in the vast extent of the ocean. But these and other deductions will be explained by me in another place. They will have already occurred to you, and I should exceed the limits of this letter, if I were to enter farther into the subject. With the most profound esteem and sincere attachment, I have the honour of subscribing myself

Your much obliged servant and friend,

FRANCIS PACCHIONI.

Pisa, 9th May, 1805.

Contrary as the results announced in this interesting communication are to analogy, there are some facts from which they receive at least such a degree of confirmation, as to entitle them to the attention of every one zealous in the cultivation of science. In 1801, Mr. Cruickshank discovered that infusion of litmus was reddened by the one end of the pile, and infusion of Brazil wood rendered purple by the other; but he supposed these effects to be owing to the formation of nitrous acid and ammonia; and only a few days before Prof. Pacchioni's letter was published at Pisa, the formation of muriatic acid by the Galvanic action was announced in London,* in a letter from from Mr. Peel, dated Cambridge, 23d April, 1805; which is as follows:

TO MR. TILLOCH.

Cambridge, April 23, 1805.

SIR,

I take this opportunity of laying before the public, through the medium of your magazine, if you think it worthy a place in that work, the following experiment.

* Philosophical Magazine for April 1805, p. 279.

I took about a pint of distilled water, and decomposed one half of it by means of Galvanism; the other half I evaporated, and I found to remain at the bottom of the glass a small quantity of salt, which, upon examination, proved to be muriate of soda, or common salt.—What induced me to try the experiment was this: I knew that when water was decomposed by means of Galvanism, the water near one of the wires had alkaline, while that near the other had acid properties. This being the case, I inferred, that if an alkali and an acid were really produced, I should by decomposing a large quantity of water obtain a small quantity of some kind of neutral salt—as was actually the case on trying the experiment. The salt could not have been contained in the water before I made the experiment, because I used every precaution to have it free from impurities. I even took the trouble to repeat the experiment, though a tedious one, and again obtained the same result, &c. &c.

Yours, &c. &c.

WILLIAM PEEL.*

P. S. A friend of mine just informs me that he has tried my experiment, and has succeeded in procuring the salt.”*

Goettling's new process for decomposing Sulphate of Baryta, in order to prepare the Muriate of that Earth; with a mode of preparing the Muriate.

Four parts of native sulphate of Baryta in fine powder are to be mixed with one part of muriate of soda, and half a part of charcoal powder.—This mixture is to be pressed hard into a

* The Editor of the Philosophical Magazine suggested to Mr. Peel, that his investigation might be more interesting if he would use water for his experiments composed from its elements—Hydrogen and Oxygen.

In a subsequent letter Mr. P. acquaints Mr. Tilloch, that an experiment conducted as desired—gave a residuum of muriate of potash.

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Hessian crucible, and exposed for an hour and a half to a red heat, in a good wind-furnace. After it has grown cold, the mass is to be reduced to a coarse powder, and boiled for a moment with sixteen parts of water; the liquor is then to be filtered, and kept in well stopped bottles.

The time of exposure to heat may be shortened one half, if the quantity of muriate of soda be doubled, and the matter occasionally stirred. In this case, too, double the quantity of water should be used to lixiviate the mass.

To prepare muriate of baryta with this lixivium of sulphuret of baryta, which at the same time holds in solution muriate of soda; muriatic acid is to be added in separate portions till sulphurated hydrogen gas is no longer extricated. The liquor is then to be filtered, a little hot water is to be poured on the residuum, and the liquor is to be evaporated to a pellicle. The lixivium being then filtered afresh, is to be set to crystallize; the muriate of soda, which is much more soluble in water than the muriate of baryta, and not more soluble with heat than without, is not deposited by cooling, and the muriate of baryta, crystallizes alone.

The remaining lixivium is to be evaporated and set to crystallize again, and this is to be repeated till no more crystals of muriate of baryta are formed,

The different products of the crystallization should be mixed together, dissolved and re-crystallized.

Tilloch.

Aya-Pana.

Bory de St. Vincent, in "his voyage aux principales Iles des Mers d'Afrique," relates, that the captain of a Danish ship, in the year 1798, first brought this plant from Brazil to the Isle of France, as a panacea. It was immediately used against all kinds of diseases, and he extols its wonderful effects, that it removes consumption of the lungs, and that it was employed in the Isle of France, as the surest means against the bite of serpents; yet

it is known, that no serpents are to be found in either of the Mascarenas. "All errors," says Bory, "continue only for a time. This quackery also has ceased; the aya-pana is as little a panacea as the German "Forget me not." Bory himself took the infusion of 30 leaves, for a catarrh, without the least effect. People in the Île de France remember the aya-pana only to laugh at the follies related of this plant, and the Charlatan who introduced it is forgotten.

Ibid.

Account of the Method of supplying Artificial Noses; as practised by the Natives of the Malabar Coast.

MOST of our readers have, no doubt, heard of the formation and adaptation of artificial noses. In Europe this operation has been generally considered as visionary, and has afforded a fine theme for the ridicule of some of our wits of the first order. For example, Addison, Steele, and Pope have not overlooked the art of famed Talusotius. This art, it appears, is actually practised, and with great success, in the western parts of India, by a cast of Hindoos, called Kamoos. An account of their method of performing this operation appears in a paper published in the Bombay Courier of the 4th April, 1795, which we have extracted for the information of the curious:

"It is much to be lamented that the Europeans, whose talents have been devoted to the literature of India, have applied themselves rather to the speculative than to the practical parts of knowledge; and that their discoveries, however meritorious, have been more curious than useful.

"Although we cannot agree with those who look to India as the source from whence Europe has derived every thing that

is valuable in science, yet we must allow that it has been the fountain of much of our knowledge; and that the common practice of the necessary arts of life among an ancient people would yet afford us not a little instruction.

“ The progress that has been made in surgery for several centuries past in Europe makes it little probable that any improvement could be expected from the natives of this country; but we think, that in two operations we may still receive instruction. The first of these is the depression of the Chryselline lens, when it becomes opaque; and the second, the formation of noses. We may also remark, that with instruments far more imperfect than ours, they perform the operation of lithotomy in the very place which, by the consent of modern surgeons is esteemed the best.

“ The Hindoos certainly deserve the praise of making artificial noses in a superior way to any people in the world; an art, unfortunately for them, the more necessary, as in no part of the world is the practice of cutting off noses so common. The process of repairing them was recommended in Europe about three hundred years ago, and was said to have originated with the Calabrians, from whom it was received by the surgeons of Bologna.

“ The celebrated Taliacotius, so unjustly exposed by some of our wits to ridicule, wrote a volume of those unions of living matter, under the title of “ *Chirurgia curtorum per Infitionem Membrorum.*” We have never had access to this work; but we have reason to think, from the following extract from *Fabricius ab Aquapendente*, that the operation in Europe was much inferior to the one in use in this country.

‘ Si verò portio nase cartilaginea ex toto amputetur, insanabile hujusmodi est vulnus. Ne tamen tanta ex abscisso naso in facie appareret deformitas ars excogitavit reparare amissum nasum, et primi, qui modum reparandi nasum calluesci fuerunt Calabri, deinde devenit ad Medicos Bonopienſes. Est tamen modus adeo

laboriosus, difficilis et longus, ut si qui huic se submiserunt si rursus indigerent nasi reparatione, non amplius se submitterent. Fit scarificata portione pinnæ nasi, deinde incisa cute brachii respondentis majori portioni nasi deperditæ, et applicata cute atque confuta cum parte scarificata nasi; brachium postea capiti alligatur, ita ut neque hinc neque inde unquam dimoveatur, quia si moveretur, non fieret agglutinatio. Facta glutinatione, iterum scarificatur nasus aliis scarificationibus, et frequentibus, adeo ut Caro rubea appareat, et cicatricis reliquia non appareant, tum vicina brachii portio inciditur et apponitur, naso et confuitur, atque hoc toties repetitur et afficitur, quousque totus nasus fuerit scarificatus, et cutis brachii ex toto fuerit brachio ablata, et naso agglutinata. Multas animadversiones in hujusmodi curatione proponerem nisi scirem hujus rei professorem magnum volumen in lucem dedisse.

“ From the above curious passage it will be observed, that the object could not be effected until an adhesion had taken place between the arm and the mutilated nose; and we may readily conceive, that an operation so long and painful would soon fall into disuse.

“ We have seen a letter from Mr. Lucas, an ingenious surgeon of Madras, describing very particularly the operation of putting on noses, which in one case he himself performed with success. This differs but little from the Indian method practised by the Koomas, a cast of Hindoos; with which, as it has been ably described by a gentleman who witnessed the process, we shall conclude these observations.

“ Some religious ceremonies are first performed: beetel and arrack put into the patient's hands, he is then laid upon his back, his arms stretched along his sides on the ground, he is ordered, on no pretence whatever, to raise his arms during the operation; and they impress him with the idea, that it cannot be successful unless he complies strictly with these injunctions. A plate of wax being previously formed into the shape of the defective nose, it is flattened and laid obliquely upon the fore-

head, so as to avoid the hairy scalp. The alæ and septum of the artificial nose being placed upwards, the other extremity of it terminating at the indentation of the ossa nasi with the os frontis, the operator marks out a portion of integuments equal to the size of the flattened wax, and then dissects it from the pericranium, leaving a small slip undivided between the eye-brows, to preserve the circulation in the detached piece until an adhesion takes place between it and the stump of the nose. He then cuts or pares off the cicatrix from the stump of the nose; and immediately behind the incision he makes an incision, into which the edge of the integuments are to be grafted or inserted.

“As there remains a slip of teguments between the eye-brows undivided, the detached portion, when turned down, is twisted half round; so that its recent surface may be applied to the face of the scarified stump, and the edge grafted into the above-described incision, which extends along both alæ to the superior part of the upper lip; a transverse incision is also made in the superior part of the upper lip, into which the septum is inserted. Thus carefully grafting or inserting the scalp, it is kept exactly in this situation by a cement, called in this country *Kitta*, which is softened with a little water, and spread on long narrow bits of cotton cloth; five or six of which are applied over each other upon the junction which forms an irregular triangle. The dressing for the wound on the forehead is pieces of cloth dipped in ghee; the patient is desired to lie on his back five or six days. Four days after the operation the cement is removed, and the junction only covered with cloth moistened in ghee or oil, which is renewed every day: neither stitches, sticking plaster, compress, nor bandages, are required. About ten days after the operation, round dossils, made of soft old cloth, are introduced into the nostrils to prevent them from contracting too much, which would happen if this precaution were neglected.

“The connecting slip of integuments is generally divided about the twenty-fifth day; and on this occasion some more

dissection is necessary, to effect an exact union, and to leave as little seam as possible on the superior part of the arch of the nose.

Europ. Mag.

On the mode of detecting Arsenic in those poisoned thereby, &c. &c.

‘ Physicians and surgeons are sometimes called upon, in cases of supposed murder by arsenic, to give their opinion ; and the questions commonly put to them are these :

‘ 1. Whether the appearances or symptoms observed in the dying and dead person give reason to conclude that they were killed with arsenic ?

‘ 2. Whether certain drugs or powders which were given to the dead person, or mixed with his food, and a part of which are committed to the physician to be examined, be arsenic, or contain arsenic ?

‘ It is necessary to be cautious in giving our answer to the first question, which seldom admits of a perfectly decisive answer, if the presumption of poison rests on the symptoms alone ; the symptoms produced by arsenic being not unlike to those which appear in some diseases, such as the cholera. But these symptoms may add to the proof which may arise from other evidence.

‘ The symptoms produced by a dangerous dose of arsenic begin to appear in a quarter of an hour, or not much longer, after it is taken. First, sickness, and great distress at the stomach, soon followed by thirst, and burning heat in the bowels. Then come on violent vomiting, and severe colic pains, and excessive and painful purging. This brings on faintings, with cold sweats, and other signs of great debility. To this succeed painful cramps, and contractions of the legs and thighs, and extreme weakness, and death.

‘ After death, the intestines are found inflamed and corroded; and sometimes inflammation and erosions of the anus happen before death.

‘ In examining the dead body, we must take care that we be not deceived by the dissolution of the stomach by the gastric liquor, and account it an indication of arsenic.

‘ If we actually find arsenic in the stomach or intestines, or in the drugs or other suspected matters which were given to the dead person, we can give a decisive answer to those two questions. But we must make ourselves sure that what we judge to be arsenic is really so.

‘ We must, therefore, take care to be well acquainted with the qualities of arsenic, by which it is distinguishable from all other substances. And its distinctive properties are these :

‘ *1mo*, It is a heavy substance, which may therefore be separated by skilful elutriation from animal or vegetable matter with which it may happen to be mixed in the bowels or in the drugs. Elutriation is commonly performed with water; but if the arsenic is mixed with oily or resinous drugs, it may be performed with alcohol. In examining the dead body, therefore, it may be proper to wash out the whole contents of the stomach and bowels into a basin of water, and then, by careful elutriation, to try if any arsenic can be found in them. And, in examining the drugs, if they are a mixture of different ingredients, we must dilute or dissolve them, by grinding them a little with water or spirits, and then elutriate.

‘ *2do*, Arsenic, besides being a heavy substance, is volatile. When heated on a red hot iron, it evaporates totally before it be red hot, and goes off in white smoke.

‘ *3tio*, It is easily metallized by mixing it with three times its weight of the black flux, and heating the mixture in a tube.

‘ *4to*, In this metallized state, it easily penetrates copper, when assisted by heat, and gives to the copper a whitish colour like that of lead or tin. It must be made of a dull red heat. This will completely dissipate corrosive sublimate, or other things which can whiten copper.

‘ 570, In its metallized state, if it be suddenly heated to a sufficient degree on a red hot iron, it takes fire, and burns with a flame, from which arises a smoke, which is white arsenic. Or, if the iron be not sufficiently hot to make it take fire, it simply evaporates, and gives vapours which have an odour like that of garlic. The same odour is perceived, if we mix white arsenic with an equal weight of charcoal dust, and throw a little of the mixture on a burning coal, or on iron strongly heated, so as to set the charcoal dust on fire. This experiment has been often misunderstood.

‘ Having had occasion some time ago to exercise myself in these experiments, and to try with how small a quantity of arsenic they might be made, I found I was able, by means of a small tube, to get metallized arsenic from one grain weight of white arsenic; and with this metallized arsenic I made the other experiments.

‘ *Remedies to save, if possible, the life of a person who has taken Arsenic.*

The first symptoms which the arsenic produces shew plainly, that, for some time after it is taken, it acts on the stomach and intestines as an highly irritating, inflammatory, corrosive substance. But if the patient survives the first violent effects, the poison being evacuated out of the bowels, the symptoms which appear afterwards are those of excessive debility, and a great irritability of the intestinal canal, and of the whole system. The degree of debility is particularly remarkable. It not only is evident from the languor, distress, and feebleness of the patient, but also from the state of the pulse. I never felt a more feeble pulse than that of a person in this situation. All this is attended with a sort of paralytic affection of the limbs, and a degree of marasmus.

‘ The method commonly recommended to save the life of the person in the first of these states is, to give plenty of milk

and oil, as obtunding remedies, and which help to wash and carry off the arsenic out of the intestines, while vomiting and purging continue.

‘ A better practice, however, might be substituted for this. Arsenic, being a heavy substance, is not easily washed out by milk, and it may probably coagulate the milk by its acidity. Oil will not mix with it after it is wet. I should prefer muck-lage, taken in large quantities; and if it do not pass off quickly, I would promote its passage by means of a purgative, such as Glauber’s salt, or sal catharticus amarus. A friend of mine once gave whites of eggs with success.

‘ In the second stage of the disorders produced by arsenic, which is commonly of long duration, a mild diet of milk is proper. The frequent use of opiates, to relieve from constant distress, and after some time electricity, are very serviceable. De Haen found electricity one of the best remedies for the cure of the disorders occasioned by lead. Mineral waters have been recommended, especially the sulphurous waters; and to imitate these, hepar sulphuris dissolved in water may be employed. But this practice is founded upon project and speculation, not upon experience.’

Black’s Elements of Chemistry.

Correction of the ill Flavour of Malt Spirits.

The flavour of malt spirits is said to be greatly improved, and made to resemble that of French brandy, by immersing in it, for a fortnight, a mixture of finely powdered charcoal and ground rice, in the proportions of $3\frac{1}{2}$ ounces of the former, and $4\frac{1}{2}$ of the latter, to a quart of the spirit. The mixture must be frequently agitated, and afterwards strained.

Med. & Chirurg. Review.

Method of restoring Essential Oils that have become thickened and rancid.

The volatile essential oils frequently lose by age their fluidity, together with the greatest part of their peculiar fragrance. These, it has been discovered, may be perfectly restored by the following simple process. To four ounces of the spoiled oil add two drachms of sulphuric æther. Digest them together for a few days, and then distil with pure water. The oil comes over perfectly limpid, and with its peculiar odour restored. A quantity of resinous matter remains behind in the still.

In this operation *M. De Roover* supposes that the æther re-composes the oil by transmitting its hydrogenous principle to the oily base. *Ibid.*

Tincture of Tobacco.

The following formula of a tincture of tobacco is strongly recommended by Mr. Noble in his treatise on Ophthalmy, for the alleviation of the pain in the temple, which frequently is a most distressing symptom in this complaint.

R. Fol. Nicotianæ incis. lb. i.

Camphoræ, 34.

Spiritus Vini rectificati.

Aquæ distillatæ, ana, lbs. ij.

A drachm or two is to be rubbed on the pained part with the finger, and repeated occasionally. *Ibid.*

Saline draught.

The following formula for a saline draught, is recommended by Dr. James Hamilton of London, as being equally agreeable, and in some cases more efficacious than the one in general use composed of carbonate of potash and citric acid,

the citric acid is often scarce; sometimes impure, and expensive; the ingredients of the other are always to be had, they are cheap, and never vary in quality.

℞. Sub-boras Sodæ gr. xv.

Super-tartris potassæ ʒss.

Solve terendo in mortareo cum lact. amygd. ʒx.

Dein adde syr. simpl.—aq. cinnam. a. ʒi. ft. haust.

Med. & Phys. Journal.

On the Use of the new Metals in the Practice of Physic.

Of the twenty-one metals now known, only one half are employed as medicines; viz. silver, mercury, tin, iron, lead, copper, zinc, antimony, bismuth, and arsenic. As these are all powerful remedies, it is rather surprising that trials have not been made of the rest. Gold, indeed, has been used, but I think not fairly. Platina, cobalt, nickel, manganese, uranite, titanite, tellurite, molybdæna, tungsten, chromite, have not, that I have heard, been used at all. Two of them which I have tried (platina and manganese,) differ totally in their effects.

Platina.

The oxide of platina, precipitated by sal ammoniac from its solution in nitro-muriatic acid, is, when dried, of a yellow and orange colour. This oxide, in doses of one to three grains, occasioned vomiting, in the same manner as tartrate of antimony. In smaller doses I found no sensible effect, except their sometimes purging and creating sickness.

Manganese.

I used two preparations of this metal: the *white oxide* precipitated from its muriatic solution by fixed alkali; and the *phosphate* of manganese, precipitated from its muriatic solution in water by phosphate of soda, which affords a light blue powder when dried.

1. The white oxide was borne on the stomach without sickness, or vomiting, or pain; in full as large doses as can be borne of precipitate of sulphate of iron by fixed-alkali; viz. in doses of ten grains, or more. As far as my trials extended, the effects were much the same as those of oxide of iron.

2. The phosphate of manganese was borne in the same doses as the above, and with the same effects.

The other new metals I have not exhibited: but it may be useful to mention, that the best (because tasteless and least irritating) preparation of copper, is phosphate of copper, precipitated from sulphate of copper by phosphate of soda. And phosphate of silver, precipitated from nitrate of silver by phosphate of soda, is a most admirable hydragogue purgative in dropsies. A grain or two is sufficient, and is better than Boerhaave's Lunar Pill.

Phosphate of iron is a better medicine than sulphate of iron, and is prepared by precipitating it from the sulphate by phosphate of soda. It may be given in doses of from ten to fifteen grains.

In fact, most of the phosphates of metals are the preferable preparations.

Med. & Chirurg. Review.

Extraordinary Instance of universal Anchylosis.

M. Percy, a surgeon in chief in the French army, read a memoir lately, to the *National Institute*, on the affection mentioned above. After having mentioned some other instances of a similar kind, related by different authors, he proceeds to recite the case he himself witnessed, and which was that of an officer, who had contracted in the field a gouty rheumatism that deprived him in succession of the use of his fingers, hands, and feet; and, after excessive pains, destroyed all power of movement, even of the lower jaw, and bereaved him also of sight. He passed several years in an elbow chair, without obtaining a moment's sleep, notwithstanding the largest doses of opium. Being re-

duced at length to sucking only a little broth or wine through the very small opening which was naturally between the teeth, two of the incisors were removed; which enabled him to speak with more freedom, and to suck liquid through a reed, and even to swallow a small quantity of minced meat.

The body of the miserable sufferer was a sort of statue or living corpse, and formed, as it were, a single piece: all the bones were folded together. Notwithstanding, he was lively in conversation; his physiognomy was full of expression, and even of hilarity. The muscles of his face had acquired a singular degree of mobility; they were continually in action, either to supply the want of gestures, which he was unable to make, or in order to contract the skin, and drive away insects that accidentally lodged on it. The patient at length died, and the skeleton is preserved in the collection of the *Ecole de Medecine*.

Ibid.

An Institution for investigating the nature and cure of CANCER has lately been planned in London, and some progress made towards its establishment.

In order to collect all that is at present known on the subject of *Cancer*, and to extend the circle of probable information, it is proposed that a correspondence shall be opened with medical men of science and experience, not only in the United Kingdom, but in the colonies, and every part of the continent.

The information particularly wished for may be collected from the following list of *Queries*, which has been circulated amongst the members.

Queries.

I. What are the diagnostic signs of a CANCER?

II. Does any alteration take place in the structure of a part preceding that more obvious change which is called CANCER? if there does, what is the nature of that alteration?

III. Is **CANCER** always an original and primary disease, or may other diseases degenerate into **CANCER**?

IV. Are there any proofs of **CANCER** being an hereditary disease?

V. Are there any proofs of **CANCER** being a contagious disease?

VI. Is there any well-remarked relation between **CANCER** and other diseases? if there be, what are those diseases to which it bears the nearest resemblance in its origin, progress and termination?

VII. May **CANCER** be regarded at any period, or under any circumstances, merely as a local disease? or does the existence of **CANCER** in one part afford a presumption that there is a tendency to a similar morbid alteration in other parts of the animal system?

VIII. Has climate or local situation, any influence in rendering the human constitution more or less liable to **CANCER**, under any form, or in any part?

IX. Is there any particular temperament of body more liable to be affected with **CANCER** than others? And if there be, what is that temperament?

X. Are brute creatures subject to any disease resembling **CANCER** in the human subject?

XI. Is there any period of life absolutely exempt from the attack of this disease?

XII. Are the lymphatic glands ever affected primarily in **CANCER**?

XIII. Is **CANCER** under any circumstances susceptible of a natural cure?

XIV. Does **CANCER** ever attack the human frame previously to the age of puberty?

XV. Is there any branch of manufacturers either more or less susceptible of the disease?

XVI. Does **CANCER** ever attack seafaring people?

XVII. Are widows or virgins more susceptible of the ~~disease~~ than married women?

XVIII. In examining the bodies of those who die from confirmed CANCER, what are the appearances of the uterus?

Ibid.

The Action of the Spleen investigated by the Effects following its Extirpation.

M. M. *Le Clerc* and *Dupuytren*, Members of *l'Ecole de Medecine*, of Paris, observed, in a dog, whose spleen had been extirpated, the bile to be separated more rapidly than usual, with a copious vomiting of liquid matters. Another dog, subjected to the same operation, and who survived it for the space of fifty days, secreted little bile; but the liver was found exceedingly enlarged, and its weight, compared with that of the whole body, was as 1 to $14\frac{1}{4}$; whilst in the same animal in health, the proportion is as 1 to $29\frac{1}{4}$.

Ibid.

On the Preparation of the Red Oxide of Mercury (Hydrargyrum Nitratus Ruber, or Red Precipitate.)

M. *Fischer* has pointed out a ready and economical mode of preparing the red oxide of mercury, which deserves notice. In the common method of forming this substance there is a considerable waste of nitric acid, all that is not employed in oxidating the metal being driven off and lost during the evaporation to dryness and subsequent heating of the nitrate. In the process here recommended, any given portion of quicksilver is to be dissolved in a sufficient quantity of the nitric acid, and the solution evaporated to dryness: with the salt thus obtained a further portion of quicksilver, equal, or nearly so, to the quantity at first employed, is to be triturated, with the addition of

water enough to form a paste, till the quicksilver entirely disappears. The moist mass is then to be gently dried, and exposed to a gradual heat in a retort. In a few minutes it assumes a red colour, and, when cooled, is obtained in the state of fine powder. *Ibid.*

New Process for preparing the Black Oxide of Iron (Æthiops Martialis.) By C. CAVEZZALI, Apothecary to the Hospital at Lodi.

The black oxide of iron, or martial æthiops, is usually prepared by macerating for a length of time iron filings in distilled water, when the iron falls spontaneously into a black powder, which is afterwards separated by washing and exsiccation. This process, however, is tedious and imperfect, and much inferior, probably, to the method here recommended, which consists in using only water enough to form the filings into a paste, adding from time to time a fresh quantity to supply that lost by decomposition and evaporation. About the fifth day the mass swells, and gives out hydrogen gas. When this kind of fermentation has ceased, and which is usually about the 16th or 17th day, the mass is repeatedly washed, to procure the finer part of the oxide thus formed. The residue is then dried and pulverized, and again washed, when a fresh quantity of oxide is obtained, less fine than the preceding. Lastly, the remaining iron is again formed into a paste, and, after the same length of time, washed as before. In this way the whole of the iron becomes converted into black oxide, and gains an increase of weight equal to about 35 per cent. *Ibid.*

Insusceptibility of Electrical Impression.

Letter from Cit. Clos to J. C. Delametherie, editor of the *Journal de Physique*.

“Having heard it said, at Sorèze, that Madame N*** was not at all subject to electricity, my curiosity was excited by the

singularity of the fact : I wished to ascertain its certainty, and the following is what I have positively learnt.

“ About 18 or 20 years ago, this lady, enjoying in other respects a robust constitution, was observed to be entirely insensible to the effects of the electric fluid : in the experiments which were made at the *Cabinet de Physique*, she submitted, without reluctance, to the most powerful shocks, and communicated them to other persons, without herself feeling them. At this period she had a sister nearly in the same situation. It is not known whether her other relations presented the same singularity. For some years past this lady has become valetudinary, and at times is attacked with nervous affections ; at present she is subject to the influence of electricity, so, however, as to feel its effects but very slightly. She is as lively, spirited, and sensible, as the generality of other persons in whom the nervous system is very mobile.

“ Is Madame N*** safe from a stroke of lightning ? I should easily believe it, if the accidents which this terrible meteor occasions did not most frequently proceed from the commotion which its explosion impresses on the surrounding bodies, as well as from the disengagement of suffocating sulphureous vapours.

“ However this may be, as my memory does not furnish me with any analogous fact in the books of physic which I have read, I communicate this to you. If you judge it of sufficient importance to merit further details, I will collect them, and with pleasure address them to you.” *Ibid.*

Children poisoned by bitter Almonds.

In the Medical Journal, published at Montpellier, we find two cases of children poisoned by the use of bitter almonds ; in one, the person had eaten them heated in a copper vessel ; in the other, the child had been made to drink the milk of bitter almonds as a remedy against worms.

It is rather singular, the variety of opinions that exist on the pernicious effects of these bodies; some maintaining them to be harmless when used by man, while they are acknowledged to be highly deleterious to other animals, particularly birds. The learned Prof. Murray made many experiments on different animals, which prove their poisonous qualities, but in different degrees in different animals. In those animals, the subjects of his experiments, as well as in the cases of the children, the effects of drunkenness were very remarkable. On the other hand, Fred. Hoffman asserts, *Medic. Ration. System.* vol. 1. that their bad effects are but little observed in the human subject, but, like *nux vomica*, highly so to other animals; he instances the dog, cat, pigeon, &c. The experiments of Schrader, a distinguished chemist of Berlin, are remarkable. He found that the prussic acid was contained in laurel water, in the infusion of peach leaves, in bitter almonds, as well as many other vegetables; and desirous to ascertain if this acid produced the same effects on the animal economy as the distilled laurel water, bitter almonds, &c. he gave a sparrow some drops of it, which was immediately killed. The same author asserts, that birds respiring the vapours of prussic acid, die as quickly as those exposed to the smell of laurel water. If bitter almonds contain prussic acid, and if this acid be mortal, may we not conclude that their pernicious effects depend on the prussic acid which they contain?

Med. and Phys. Journal.

NEW PUBLICATIONS.

MEDICAL *Inquiries and Observations.* By Benjamin Rush, M. D. professor of the institutes and practice of medicine, and of clinical practice, in the University of Pennsylvania. In four volumes. The second edition, revised and enlarged by the author. Philadelphia, 1805. Conrad & Co. price 9 dollars.

The preface to the present edition, will best shew what changes have been made in it by the author.

IN the second edition of the following Medical Inquiries and Observations, the reader will perceive many additions, some omissions, and a few alterations.

A number of facts have been added to the Inquiry into the Effects of Ardent Spirits upon the Body and Mind, and to the Observations upon the Tetanus, Cynanche Trachealis, and Old Age, in the first volume; also to the Observations upon Dropsies, Pulmonary Consumption, and Hydrophobia, contained in the second volume.

The Lectures upon Animal Life, which were published, a few years ago, in a pamphlet, have received no other additions than a few notes.

The phenomena of fever have not only received a new title, but several new terms have been adopted in detailing them, chiefly to remove the mistake into which the use of Dr. Brown's terms had led some of the author's readers respecting his principles. A new order has likewise been given, and some new facts added, to the inquiry upon this subject.

In the Account of the Yellow Fever of 1793, many documents, interesting to the public at the time of their first publication, are omitted; and many of the facts and observations which related to the origin of the fevers of 1794 and 1797, now form a part of a separate inquiry upon that subject, in the fourth volume.

The histories of the yellow fever as epidemics, and of its sporadic cases, have been published in the order in which they have appeared in Philadelphia, to show the influence of the weather upon it, and the impropriety and danger of applying the same remedies for the same epidemic, in different and even successive seasons. The records of the first cases of yellow fever, which have appeared in each of the twelve years that have been noticed, are intended further to show the inefficacy of all the means, at present employed, to prevent its future recurrence.

In the fourth volume, the reader will find a retraction of the author's former opinion of the yellow fever's spreading by contagion. He begs forgiveness of the friends of science and humanity, if the publication of that opinion has had any influence in increasing the misery and mortality attendant upon that disease. Indeed, such is the pain he feels, in recollecting that he ever entertained or propagated it, that it will long, and perhaps always, deprive him of the pleasure he might otherwise have derived from a review of his attempts to fulfil the public duties of his profession.

Considerable additions are made to the facts and arguments in favour of the domestic origin of the yellow fever, and to the Defence of Blood-letting.

The Account of the Means of Preventing the Usual Forms of Summer and Autumnal Disease, appears for the first time in this edition of the author's Inquiries. Part of the facts intended to prove the yellow fever not to be contagious, were published in the sixth volume of the New-York Medical Repository. The reader will perceive, among many additions to them, answers to all the arguments usually employed to defend the contrary opinion.

The Inquiry into the Comparative State of Medicine, in Philadelphia, between the years 1760 and 1766, and 1805, was delivered, in the form of an oration, before the Medical Society of Philadelphia, on the 18th of February, 1804. Some things

have been omitted, and a few added, in the form in which it is now offered to the public.

If this edition of Medical Inquiries and Observations should be less imperfect than the former, the reader is requested to ascribe it to the author having profited by the objections he encouraged his pupils to make to his principles, in their inaugural dissertations, and in conversation; and to the many useful facts which have been communicated to him by his medical brethren, whose names have been mentioned in the course of the work.

For the departure, in the modes of practice adopted or recommended in these Inquiries, from those which time and experience have sanctioned, in European and in East and West-Indian countries, the author makes the same defence of himself, that Dr. Baglivi made, near a century ago, of his modes of practice in Rome. "*Vivo et scribo in aere Romano*," said that illustrious physician. The author has lived and written in the climate of Pennsylvania, and in the city of Philadelphia.

A Treatise on the hidden nature, and the treatment of Intermitting and Remitting Fevers: illustrated by various experiments and observations; in two books, by Jean Senac, M. D. Translated from the Latin, with notes, by Charles Caldwell, M. D. Philadelphia, 1805. Kimber, Conrad, & Co. pp. 299, price 1 dol. 75 cts.

RECOMMENDATORY PREFACE BY DR. RUSH.

THE following translation of Senac's treatise, "*De recondita februm intermittentium, tum remittentium natura, et de earum curatione*," was undertaken by Dr. Caldwell, at the request of the subscriber. He has long known it to be a judicious and useful work, and has derived much assistance from it in his practice. He is happy in this opportunity of recommending it

to the students of medicine in the United States, as peculiarly calculated to assist them in forming just opinions, of the nature and treatment of the summer and autumnal diseases of our country.

BENJ. RUSH, M. D. &c. &c.

June 29, 1805.

Practical Observations in Surgery, illustrated with cases and plates, by William Hey, Esq. F. R. S. Member of the Royal College of Surgeons in London, &c. &c. Humphreys, Philadelphia, 1805, pp. 332, price 3 dol. 25 cts. boards. First American Edition.

The Lectures of Boyer, upon Diseases of the Bones, arranged into a Systematic Treatise, by A. Richerand, Professor of Anatomy, &c. &c. at Paris. Illustrated with plates. Translated from the French, by M. Farrell, M. D.—First American edition, with notes and additional plates by Joseph Hartshorne, M. D. Philadelphia, 1805, Humphreys, pp. 368. price 4 dol. 12½ cts. boards.

A Compendious System of Anatomy, in six parts: I. Osteology. II. Of the Muscles, &c. III. Of the Abdomen. IV. Of the Thorax. V. Of the Brain and Nerves. VI. Of the Senses. From the Encyclopaedia, illustrated with twelve large Copperplates, pp. 419, price 2 dols. Dobson. New edition.

A System of Surgery, extracted from the works of Benjamin Bell, of Edinburgh; by Nicholas B. Waters, M. D. Fellow of the College of Physicians of Philadelphia, and one of the Surgeons of the Philadelphia Dispensary; illustrated with Notes and Copperplates, third edition, pp. 607. price 3 dols. Dobson.

The Philadelphia Medical and Physical Journal, collected and arranged by Benjamin Smith Barton, M. D. Professor of Materia Medica, Natural History and Botany, in the University of Pennsylvania. Part 1. vol. 2. Philadelphia, 1805. Conrad & Co. 8vo. pp 208. 1 dollar.

A medical institution has been lately established in Philadelphia, under the title of the "PHILADELPHIA MEDICAL LYCÆUM."

At a meeting of the Philadelphia MEDICAL LYCÆUM, on the 1st of January 1806, the following gentlemen were chosen officers for the ensuing year.

Dr. Cox,	}	Presidents.
Dr. Dewees,		
Dr. Chapman,		
Dr. Dorsey,		
Dr. E. Griffith,		Treasurer.
Dr. Rousseau,		Librarian.
Dr. Meredith,		Curator.
Dr. Farquhar,		Corresponding Secretary.
Mr. S. S. Tucker,		Recording Secretary.

The following gentlemen were elected junior members of the LYCÆUM.

Mr. Tucker,	Mr. Jones,
Mr. Weems,	Mr. Nelson,
Mr. Wroth,	Mr. Little,
Mr. Clagget, jun.	Mr. Dooley.

MEDICAL MUSEUM.

VOL. II.....No. IV.

*Account of the Measles in Jamaica: By J. QUIER, in a Letter to
Dr. DONALD MONRO.**

JAMAICA, June 28, 1774.

DEAR SIR,

I HOPE you will not be displeased with my transmitting to you the following account of a disease, that has sometimes occasioned great mortality in this island, and been almost equally dreaded with the small pox ; as its manner of appearance in the epidemic I describe, (as far as I have been able to discover) was the same it has *always observed in this country ; and differed much from what is generally seen in Europe.*

The measles first made their appearance within the verge of my practice, in December 1770. In January, of the succeeding year, they spread apace ; and, during the three following months, were so epidemical, that I had seldom less than one hundred and fifty negroes ill of that disease at a time.

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* This letter of Mr. Quier to Dr. Monro, referred to in the paper in the preceding number, is so little known, though in print, that the Editor will be excused for inserting it.

In this epidemic, the *fever* differed greatly in different people, in the manner of its *first attack*. In *some*, it began at once with considerable violence, and was accompanied, within a day or two, by the eruption; in *others*, it was of a slow remittent or intermittent kind, with quotidian *paroxysms*, and preceded the eruption for five or six days. The usual symptoms, (of cough, inflamed eyes and throat, anxiety and restlessness,) were observed here in a very great degree. But the *most certain* diagnostic of the disease in its beginning, (and which I do not remember to have found mentioned by any author that I have met with,) was, the appearance of the *white aphthous specks about the gums*; which were always visible several days before the eruption, and not unfrequently before the fever began. By this symptom, I discovered several to be affected with the measles, before they were themselves sensible of any indisposition. As the fever increased, and the eruption approached, these specks spread themselves, (together with an erysipelatous inflammation) over the whole surface of the mouth and fauces, as far down as could be seen into the pharynx. The *cough* was short, dry, and tickling, harassing the patient incessantly; but without any considerable difficulty of breathing, or sense of oppression at the breast, in the intermissions of coughing; and seemed to proceed from the same erysipelatous inflammation being continued along the larynx, trachea, and its branches, quite into the air-vesicles of the lungs. The *pimples* of the eruption did not appear so much in clusters as is usually the case in Europe; but were more solitary and distinct, larger, more elevated every where above the surface of the body, and attended with more intense heat and inflammation of the *skin*. As the exanthemata spread farther and grew more numerous, the fever and cough increased; and the inflammation of the skin, eyes, mouth, and throat became more intense; and seemed to be frequently continued quite through the gullet, stomach, and intestines;—the patient being now commonly attacked with most enormous *gripes and purging*, sometimes of blood and mucus; and often likewise with incessant *vomiting*.

About four days from the first eruption, the exanthemata generally disappeared; and at the same time, *if the patient had proper medical assistance*, the fever likewise. But when this was not the case, and bleeding had been sparingly used or entirely omitted (where copious bleeding had been requisite;) I have seen instances in which the fever *increased at this time*; the inflammation of the fauces changed from an erysipelatous to a phlegmonic nature; the cough grew more violent; the patient vomited incessantly; and was seized with a dysentery, attended with acute and constant pain of the belly: and died soon after; either from the inflammation of the stomach and intestines, or from a gangrene supervening.

But however judiciously the disease might have been treated, the fever and eruption were *generally succeeded*, sooner or later, by a *flux*; in which was voided, (sometimes with and sometimes without liquid feces,) a great deal of mucus; most commonly joined, but not intimately mixed, with blood. The stools were preceded by sharp gripings; and were sometimes so frequent, as to bring the patient into the most imminent danger, and in one case carried him off very suddenly. Besides the gripes which preceded the stools, the whole abdomen was affected with constant pain and soreness; the dejection of mind and prostration of strength were great; the stomach frequently rejected every kind of food; and nausea and vomiting were sometimes very urgent, and if removed, returned again after a short time. The tenesmus occasioned very commonly, in children, a troublesome protrusion of the rectum through the anus; and, in pregnant women, brought on a discharge of blood from the uterus, and sometimes abortion. The rectum was sometimes most evidently ulcerated. In a boy about six years old, (who *had not* been sufficiently blooded in the febrile stage of the disease,) the anus was ulcerated; the *true* aphthæ, which appeared during the flux, became corroding ulcers, and spread over the whole mouth, fauces, and lips; a pimple on the margin of the upper palpebra of the right eye, and a number of faruncles

which broke out on different parts of the body, (especially where blisters had been applied,) were converted into large ulcers, and mortified before his death.

Those who were *not* attacked with the flux, had boils in different parts of the body; and very commonly an itchy eruption over the whole skin. The boils and itchy eruption likewise generally *succeeded* the flux; and whenever they appeared, were salutary symptoms. In one case, where the flux did not succeed the fever, the matter which used to be discharged that way, was evidently translated to the brain; and occasioned much danger to the patient.* During the flux, a febrile paroxysm of several hours or a whole day, happened to some; and others had an intermittent fever of more or less continuance.

* Plato, a stout negro, about 30 years old, had no purging after the recession of the measles. May 16, 1771. He complained yesterday of slight tremors, and rejected food; had no sleep last night; took this morning, *sal cathart. amar.* seven drachms, with *ol. olivar.* half an ounce, which gave him two stools only: this was the first purge after the measles. This evening I was sent for. The symptoms were, frequent convulsive tremors; great restlessness and perpetual jactation of his body; he talked nonsense, and collected straws from the floor; but when spoken to, would recollect himself, and answer with tolerable coherence; a perpetual short dry cough; respiration short, interrupted and laborious; apparently great anxiety; perpetual sputation; eyes constantly in motion, with a very wild look; pulse low, weak, and remarkably slow, but regular; skin cold. When asked where his complaint lay, he said he felt pain in his left side and breast; if desired to shew where with his hand, he applied it to the region of his heart. This day, eat nothing. *R. camphor. gr. v. asafœtid. gr. ij. test. ostrear. pp. q. s. ut ft. pulvis, sumend. sexta quaque hora, cum spt. C. C. guttis xxx, ex infus. folior. falvis.* A blister was applied between the shoulders. For food, weak broth was given often in small quantities. 17th. He slept a little last night, but complained of pain in his head. The same symptoms as yesterday, with this difference; that he was now more sensible, and answered when spoken to, with more coherence. No stool since yesterday before noon. Blisters were applied to the head and thighs, and a clyster injected in the evening: the medicine continued as before. 20th. All the nervous and spasmodic symptoms removed: (He grew better on the 18th.) The medicine ordered to be taken now only three times a day. As he complained much of the soreness occasioned by the blisters, and want of sleep at night; fifteen drops of tinct. thebaic. were directed to be given at night, as long as requisite. 23d. No other complaint but of weakness.

An *inflammatory diathesis* of the constitution remained, in most who had had the disease severely, for several months afterwards. Some few instances occurred of a disposition to a *dropy*, where the body was extremely reduced by the flux.

Those on whom the epidemic exerted its greatest fury, were the most hale, strong, and valuable slaves. The worthless and lazy, and such as were emaciated through want of food, eating dirt, or severe usage, had scarce any indisposition.

The symptoms which I have related naturally distinguished the disease into two periods: the *Febrile* and the *Dysenteric*; the curative indications of which being very different, I will now separately describe the *method of treatment* which I found to succeed best in each.

1st. In the *Febrile* state of the disease, *no one died*; notwithstanding many were in the greatest danger. The safety however of the patient in the dysenteric and most dangerous period, depended chiefly on the method of cure made use of in the former. As I constantly observed that the most robust people, and those in whom the fever and inflammatory symptoms rose highest, were always attacked with the severest fluxes; I endeavoured to *prevent the generation of morbid matter* to be discharged by the intestines in the second stage, by repressing the fever and inflammation by means of a cooling regimen, and as large and frequent venesections as the patient's constitution would bear. *As soon therefore as any one complained*, (unless the state of his body absolutely forbid it,) more or less blood was taken away, according to the age, constitution, and other circumstances of the patient. If the mouth only was yet inflamed, and the fauces not at all or but slightly, a moderate dose of sal cathart. amar. was given, either on the same day, or next morning:—but if it appeared by the state of the throat, that probably the inflammation extended to the *stomach* or farther,

this was omitted; (as I found that the mildest purgative could not be borne under that circumstance in this stage of the disease, without danger of an hypercatharsis :) an emollient clyster was however commonly thrown up with advantage. The patient was not suffered to confine himself; but was ordered to keep constantly, by day, in the open air in the shade. Warm decoctions of emollient and pectoral herbs were used for common drink. If the stomach could bear it, small portions of nitre were given. Oily tinctures or spermaceti emulsions were used plentifully, to mitigate the cough; and moderate doses of tinct. thebaic. were usually given at night. The mouth and throat were gargled with some warm emollient decoction, sweetened with muscovado sugar;—and the eyes were cooled by the frequent application of a weak solution of white vitriol and saccharum saturni.

As the fever and inflammatory symptoms increased, the bleeding was repeated; and very frequently a second time, about the state of the fever, just before the desquamation of the exanthemata began. But the most alarming of all the symptoms (and which demanded bleeding most,) were the vomiting and purging, which sometimes happened in this period. As this was chiefly a spasmodic affection of the stomach and intestines in consequence of the inflammation, and attended with excruciating pain; after bleeding, recourse was had to opium, and that in considerable quantities: (two, three, or even four grains of opium were requisite to be given to adults in the course of every twenty-four hours.) Besides this, spermaceti, pulvis e tragacanth. comp. gum arabic, (or the gum of the acajou tree), starch-jelly, and starch clysters with tinct. thebaic. and sometimes testaceous powders, chalk, or Armenian bole, finely pulverized, were absolutely necessary to be freely used; and by these means, it was generally pleasing to see with how much certainty and ease these symptoms were removed. At first, I gave in this case, a small quantity of manna and sal cathart. amar. with a

little sweet oil, and a stronger opiate at night after it than usual; but the evacuation which ensued, was commonly so violent and sunk the patient so low, that I found I was mistaken in my idea of the indication; and soon desisted altogether from the use of a purgative.

In this stage, I chiefly relied on venesection, for relieving the cough. In some few cases that were more than usually importunate, I applied blisters to the thighs: * but the use of these was commonly reserved for the dysenteric period.

2d. When the disease was treated in this manner, after the exanthemata had continued out on the skin about four days, (as I have already said,) they gradually disappeared; leaving the surface of the body covered with furfuraceous scales:—the fever and inflammation of the eyes, mouth, and throat, ceased about the same time: the cough generally continued longer. And now, either immediately, or sometimes not till several days afterwards, the *Dysenteric period commenced*. Not unfrequently the purging, which had begun in the febrile, was continued into, and formed the dysenteric stage.

Immediately upon the complete recession of the exanthemata, and the appearance of the bran-like scales, if the inflammation of the mouth and fauces was quite gone, it was found expedient, (whether the patient had or had not yet a flux,) to give a gentle dose of manna and sal' cathart. amar. with the addition of some sweet oil:—but if the internal inflammation still subsisted, I thought it proper to defer the purgative for a day or two longer.

Bleeding, if it had been duly administered in the former period, was not only unnecessary now, but hurtful, (as it evidently could not much lessen the quantity of matter to be car-

* Some West India practitioners have not only applied blisters to the inner part of the thighs for coughing, but for vomiting.

ried off by the alvine excretion ; but would reduce the patient's strength, already scarcely sufficient to bear so profuse a discharge.) Bleeding was without doubt indispensably requisite in those cases, in which I mentioned my having seen the fever and internal inflammation *increase* after the disappearance of the eruption, *through want of it* in the former part of the disease ; but I had it not in my power to determine from my own experience, whether, in cases where the morbid matter is turned into the stomach and bowels, (while the inflammation with which they were affected in the febrile period subsists,) it be most expedient to administer *purgatives immediately* ; or to endeavour *first* to remove, or at least to abate, the inflammation by repeated bleeding, opiates, and demulcents ; though I am inclined to believe the latter. The cases of this kind which occurred, were but few : they soon proved fatal, but did not happen in my own practice.

At night, after the operation of the cathartic, an opiate was always given. But although the purge generally *mitigated* the severity of the flux, if already begun ; or rendered that subsequent to it more mild than it would otherwise have been ; yet it was never able to carry off the former, nor often to prevent the latter : often indeed, the stools continued from this time to increase in number, notwithstanding the opiate given at night ; and the Dysentery began from thence.

If the *cough* remained after the purge had been administered, (as was most frequently the case ;) blisters, applied to the thighs very seldom failed to remove that symptom entirely.

Let us suppose the *Dysentery to be now begun*, with severe gripes, and blood and mucus in the stools ; and the patient to have taken one dose of the oily purge. Here it was proper to have recourse to the *same* method which I proposed in the *flux of the febrile period*. The same mucilaginous, demulcent, and absorbent medicines were necessary to defend the stomach and guts

from the acrimony of the morbid matter: and opiates were requisite, not only to prevent the evacuation from exhausting too much the strength, and throwing the patient into a delirium; but likewise, to quiet the painful spasms, to moderate the inflammatory disposition, and to impede the accession of its more direful effects. Nor was any danger to be apprehended from the acrid matter being pent up within the body, by the use of opiates; as two, three, or four grains of opium taken by an adult, in the space of twenty-four hours, were in general, at this time of the disease, but barely able to restrain the flux within such bounds, as not to exhaust the patient.*

The manner in which the blood appeared in the stools, together with the tenesmus, indicating a violent irritation of the rectum by the *sharp humours* which flowed through it; I ordered a starch clyster, with the addition of some tinct. thebaica, to be injected daily twice; which not only gave ease, and prevented the ulceration of that gut; but greatly diminished, and in time entirely stopped, the excretion of mucus. From this circumstance, it likewise appeared, that the source of the mucus was commonly no higher than the great intestines; and most frequently perhaps in the rectum, and inferior part of the colon; in which opinion I was confirmed, by observing, that towards the decline of the flux, some persons had three or four stercoraceous stools in a day, of a tolerable consistence; but between them, a frequent excretion of mucus, without the least admixture of fæces.

If the patient had *no* flux, a repetition of the purgative, about four days after the first dose, commonly finished his cure; but if he *had* the flux, it was still more necessary; and after it, the

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* This free use of opium, at this time, may appear reprehensible; but the frequent fainting fits, and sometimes even sudden death (one instance of which occurred in my own practice, and I have known of others) which happened from the prodigious discharge by stool, were no otherwise to be prevented; and the success justified the use of the medicine.

same medicines were to be used as before ; with a further repetition of the oily purge, if feverishness, slight nausea, tension of the belly, or return or increase of the griping pains, required it.

As soon as by the use of the oily purges, opiates, and demulcent medicines, the painfulness of the abdomen and gripes were either wholly or nearly gone ; and the stools (however liquid,) became stercoraceous ; it was then time to endeavour to divert the humours from flowing inwards, by increasing the discharge by the cutaneous emunctory ; to restrain the rapidity with which the peristaltic motion precipitated the contents of the intestines towards the anus, by obliterating the impression of the morbid stimuli, by means of paregorics, and introducing others of a different nature ; and to restore the tone of the bowels by medicines of the warm and bracing kind. These several indications I found to be very successfully answered, by continuing the use of the opium as before ; by giving half a drachm of theriac. androm. or mithridate, two grains of rhubarb, and from five to ten grains of toasted nutmeg, or a drop or two of its essential oil, or one of that of cinnamon, three or four times a day ; and directing a decoction of logwood, or of the bark of the guava tree, with some warm aromatic, to be used for common drink. If the quantity of rhubarb, in the medicine just described, after being taken for a few days, seemed to purge the patient ; it was best to omit it for two days ; and then add it again for about three days, alternately.

About the decline of the flux it generally happened, after the stools had decreased in number, and grown of a better consistence for some time, that the *belly became tense and painful* ; and shortly after, a pretty severe purging succeeded for two or three days ; when the frequency of the stools gradually diminished, and at length the belly became again tense and painful. This painful tension of the belly and purging continued to return alternately, for some time ; and now and then proved very troublesome. As soon, and as often as this tension and painfulness

appeared, it was found expedient to give a small dose of manna ; or, what I thought better, of rhubarb, (which could not be used in the earlier part of the flux, without occasioning most severe gripes, and increasing the discharge of blood.) After the operation of the rhubarb, or manna, (as often as it was requisite to have recourse to them,) the use of the medicines just now recommended, was to be resumed ; and in this manner to be continued, until the intestines and their functions were restored to their natural state.* By these means molt of the sick escaped ; some recovering very soon, and without any difficulty ; others only by degrees, after the flux had run on for several weeks. Not a little care was requisite to *prevent a relapse* ; which happened very easily from irregularities, or catching cold. I have likewise known a flux come on from getting wet in a shower of rain, near a month after the disappearance of the measles ; when only a very trifling purging had succeeded the recession of the exanthemata.

Not unfrequently it happened pretty early, in this second period of the disease, if there was but little or no purging ; or, if the flux was more profuse, towards its decline or after its total cessation ; that many were affected with *loss of appetite, nausea, and sometimes puking*. In this case a vomit, and after it a dose of rhubarb, were given ; which always removed these symptoms for the present ; but as they were very apt to return, it was generally necessary to repeat these evacuations after a short interval of time.

As after those violent affections of the stomach and bowels, these viscera frequently contracted a great debility, (which produced loss of appetite, indigestion, and flatulency ;) the use of bitter and aromatic infusions was found of great advantage.

* The rhubarb was always left out of the medicine for a day or two after the purge had been taken. Some people were now and then affected in the manner I have just mentioned, after they had altogether ceased to take medicines.

(as was not unfrequently the case, though I never observed it either in the beginning of the flux or while it was very severe,) it was necessary to have recourse to the bark.

If the disease was treated in the manner I have related, notwithstanding the violence of many of its symptoms, it was far from being fatal; the number of those that died, according to the best calculation I could make, not amounting to more than *one out of eighty*.

I have already observed, that most people were particularly subject to *inflammatory complaints after the measles*:—The other morbid affections which occurred in consequence of them, were not many. The most remarkable were,

I. A *tetanus and locked jaw*, in a girl about eleven years old, from catching cold in a rainy day. She perfectly recovered in the space of a month, by means of opiates: the greatest quantity she took, was twenty drops of tinct. thebaic. every two hours.

II. A woman about forty, and a boy about seventeen years old, after severe fluxes, grew *anasarcous*; the boy had been affected with the same disorder more than once before. The woman died about three months after the measles; but the boy recovered, notwithstanding the scarifications of his scrotum had mortified, and those on his legs had been kept with difficulty from being affected in the same manner. They both took the cort. Peruv. and chalybeate preparations; and were supported with the most generous food that could be afforded them.

III. A sucking child, of the age of eighteen months, had a slight *dry cough* after the measles; to this acceded a *periodical fever*, with quotidian paroxysms. All my endeavours could not perfectly remove the cough; which if at any time a little better, shortly resumed its former violence. The fever likewise, although it sometimes ceased for a week, or at other times longer, yet constantly returned again. The lungs were evidently much obstructed, but did *not seem to be suppurated*; the fever was also

more inflammatory, and had severer paroxysms, than is usual in the purulent kind. The child lingered in this manner for about six months, and then died *tabid*. I have observed the same kind of fever and cough at other times, from obstructed and inflamed lungs in this country.*

To these remarks it may not be improper to add, that during the course of the epidemic, the weather was *extremely dry and fair*; but about the end of April, some rain fell, and in the beginning of May the *wet season set in*; which so entirely put a stop to the disease, that I saw only one boy seized with it after the rains began.

I am, &c.

J. QUIER.

DR. DONALD MONRO.

* In this country, where hardly any fevers occur, but of the intermittent kind; and those with every variety of type, and irregularity of paroxysm, and accompanied frequently with diverse adventitious symptoms, and, amongst others, with affections of the lungs; it is perhaps impossible to discover immediately this hectic fever; which will therefore, most probably be treated at first, whenever it happens, as one of the *intermittent* kind, with a cough. With respect to the necessity of bleeding, no one can be mistaken; but the bark will be too readily given; which always increases the cough and difficulty of breathing, and frequently changes the intermittent into a continual fever. The blood in this disease, (in whatever quantities and however often it be drawn,) has, to the very last, *more* of the tenacious inflammatory size than, I think, I have seen at any other time. As far as I have observed, relief is only to be expected from *frequent bleedings, the antiphlogistic neutral salts, dilution, and a low diet*: the bark is certainly noxious. Herein this disorder differs from most inflammatory pleurisies and peripneumonies in this country; which, if *venesection be very liberally used at the same time*, bear the bark well. Indeed the free and early use of this medicine is as necessary in the diseases here, as in the venetous fevers in Italy, and some other southern countries of Europe; for, (as the fever, which attends these local inflammations, is always, unless by accident, of the intermittent kind) if the greatest remission of the symptoms, that can be wished for, be obtained at the end of a paroxysm; the next return of the fever will almost always, if the case be in the least degree severe, bring every thing back into the same, and frequently a much worse state than before. Next to the lancet, therefore, the saving life depends on making the patient swallow, in the intermission, as much bark as his stomach can bear; that, if possible, a return of the fever may be prevented, or at least the severity of the next greatly mitigated.

*An Account of the Dissection of a young Man, who died Dropsical, which is referred to in the Letter to Dr. RUSH.**

A. B. aged about twenty-two years, having occasionally felt indisposed, and most commonly indolent for the last two or three years of his life, was attacked in a distant part of the state, in the fall of 1804, with two acute diseases in succession.† After his apparent recovery, he returned home, lived full, and took little exercise; and partial swellings, though (as is believed) without permanence, manifested themselves from time to time in different parts of his body. In January, he applied for advice on account of a confirmed ascites and anasarca, his evacuation by urine being at this time very small. His death took place April 11, 1805; notwithstanding a considerable variety of the regular methods of cure had been employed, and in some respects, with apparent success.

His body being opened, exhibited the following appearances.

The tumor by different means had wholly quitted his thighs, legs and face; and was much reduced in the abdomen: where however, there were still ten or eleven pints of serous fluid, of a light brown colour, joined by about one pint of pus.

The omentum, mesentery, and mesocolon were ragged and thickened; and contained many knots.

The liver had suffered erosion to the depth of about one-eighth of an inch, over a very great extent of its surface; some small portions of it seemed wanting, as if sliced off by different cuts of a knife; one small portion of the substance seemed full of punctures, accompanied with cracks, as if it had been the

* See the letter—p. 341, of this Volume.

† Said to be fever and dysentery; but the order of their attack is not known.

subject of a peculiar kind of rot, to the depth of an inch ; various parts of the edges of the liver were schirrous ; but there was no abscess. The colour within was tawny and brown, as if the liver had been kept for a time in hot water. Where it had the extensive erosion above mentioned, it was thickly coated with yellow matter, resembling the healthy pus of a healing wound.

The rectum within was inflamed, perhaps owing to the effect of medicines.

The *outer* coats of the intestines, as also of the kidneys, and in general of all the viscera, seemed fallow and sodden ; as if affected by the fluid in which they had been steeped.

The penis and scrotum had lost the fluid, which had swelled them for a short time during the disease ; but the end of the penis seemed of a blackish red colour, as if disposed to mortify ; a tendency which had before manifested itself with some of the scarifications in the feet.

The urinary bladder and the gall bladder, the kidneys, the spleen, and the pancreas, exhibited nothing within which excited attention ; excepting that several of them wanted the colour belonging to health.

The heart contained three polypi, was very flabby, and had a remarkable enlargement of part of its vascular system ; which are among the symptoms noticed by Cheselden, in various cases of dropsy.

There was little blood seen in the body.

Some small tubercles were found on the surface of a part of the lungs ; and the posterior parts of both lobes were full of dark coloured blood. The patient had suffered a severe attack

of cough about a fortnight before his death, in consequence (as he supposed) of cold taken while riding; but the cough had greatly abated; and the colour of the blood was such as Dr. Baillie describes, when the blood occasionally *gravitates* to those parts in the recumbent posture of a dying person.

The matter seen in this body differed from the yellow *floating* fibrous matter, sometimes accompanying effusion and inflammation; (as for example, in the bodies of some females who die of fevers which are the occasional result of childbirth.) It was soft and pulpy; and kept at the bottom of the fluid. The matter also upon the liver, had the appearance of common healthy pus. The test however of the solution of sal ammoniac, mentioned by John Hunter, in his chapter on pus, was not applied; nor were any of the other tests which have been noticed, on this occasion.

One remarkable point in this dissection was the apparent affection of the liver and other parts, owing to certain qualities in the fluid which surrounded them. The operation of an *external* cause upon the liver seems evident from the following proofs: First, from so little loss of substance having occurred *internally*; secondly, from the loss outwardly being so equable and superficial, throughout the whole of a very large extent; and lastly from the healing process having begun, when the fluid in the abdomen lessened, and left the liver dry; (the patient favouring the retreat of the fluid from this quarter, by his posture both in bed, and out of it.) As the disease had repeatedly fluctuated, it is probable, that a like course of proceeding had first corroded the parts of the liver which seemed to have been cut off by a knife (as mentioned above,) and then given room for a healing process to follow upon it.

What has just been said of the action of the foreign fluid upon the liver, which is confirmed by the fallow and sodden complexion of the integuments, and the ragged and diseased ap-

pearance of some of the membranous expansions in the abdomen ; all these circumstances, I say, appear to countenance the plan of *early tapping*, recommended by Dr. Fothergill ; especially when we consider at what expense to the constitution many of our evacuating remedies operate ; an expense, saved by the trocar.

In the late state of this disease, it appears that even tapping itself may be of little service ; for though the liver in the above case was in the way to heal, when not immersed in a liquor which was strange to it ; yet the texture of the mesenteric glands, &c. seemed so irrecoverably injured, that we find that the patient died, *though he was recovering from the dropsy*.

The nature of the fluid may be thought in some degree to have been influenced by the medicines ; and I find these to have chiefly been as follows ; having been variously employed either according to a change of plan or a change of symptoms. They are named without regard to order : being digitalis, cream of tartar, squills, seneka root, a solution of the terra ponderosa in the muriatic acid, chalybeates, guaiacum, calomel with the drastic purgatives, absorbents, gums, oil, soap, opiates, and ashes. From my occasional knowledge of the treatment used, the ashes (which were employed late) appear to have been the ingredient the most likely to have given activity to the powers of the fluid, as far as these were affected by medicine. But in favour of ashes it must be said, that if they sharpened the fluid, they also seemed to contribute much to the evacuating it ; and in any event, prudence requires this case to be compared with others, before we form any general opinions. It is enough at present to have shewn, what sometimes may be an effect of dropsy, having an origin and a treatment as above related.

To this account of the treatment, in order to make it complete, I must however add, that blood was thrice taken. It had been serviceable in some other cases, and the patient was young

and not deficient in blood. His friends, it seems, thought the measure useful; and the attending practitioner conceived, that it removed some unfavourable symptoms, from the character of the blood. For myself, I have often seen gentle bleedings act as a powerful alterative, and dropy is generally dependent upon some other disease.

April 18, 1805.

History of a fatal Case of Hydrocephalus. By Dr. HARRIS, of Kingston, Jamaica, in a Letter to Dr. FARQUHAR, dated July 30th, 1805.

NOTHING tends so much to the advancement of medical knowledge as a faithful record of cases. It is not only profitable to the recorder, but it behoves him to publish his practice for general advantage. A candid practitioner will never be afraid to have his endeavours for the benefit of his fellow creatures canvassed by the public eye; because, self, not being his prevailing principle, he is conscious of having exerted himself both for the good of his patient and profession.

M. K. H. in her twenty-sixth month, a healthy child, of a very lively disposition, and uncommon sagacity, on the 20th of October, 1802, discovered symptoms of indisposition, from being more inactive than usual, but had no particular complaint. She took two grains of calomel at bed time, and was carried to the country next morning to stay a few days. She did not discover her usual desire for breakfast, and brought up some milk, she had taken, in a curdled state, some time after. Her mother gave her some magnesia, which operated once during the next night; and brought her to town on the morning of the 22d. I found her dull and heavy; but she had no symptoms of fever, farther than a small degree of partial warmth in the palms of her hands and the soles of her feet. As

she was about cutting her last jaw teeth, and complained of them, the gum being swelled, I scarified it. She then took an emetic, which brought up some green, undigested stuff, but it did not carry off the drowsiness. At night she took an antimonial, and passed a restless night; with an incessant short cough. This gave the idea of cold and indigestion being the cause of indisposition.

23d. She took castor oil which operated once, and brought away some ascarides. The antimonial was repeated at night.

24th. She took rhubarb and calomel, which came up with some phlegm. At night she took three grains of calomel, which operated three times before morning.

25th. The oil was repeated, which produced one motion. She passed this day in a kind of unwillingness to do any thing but slumber: but was much troubled with the cough. Her skin was cool but dry, and she was put into a tepid bath without any visible good effect; but seemed rather to oppress her breathing while she was in it.

26th. A restless night. The cough was incessant to-day; but did not call forth much affection when it attacked her. It seemed to proceed from the stomach; and, keeping her from sleep the whole night, an emetic of Ipecacuan was given her on the 27th, which lengthened the intervals of coughing the succeeding night.

28th. The stupor increasing and the pulse varying, though not above seventy in a minute, I began to be much alarmed at her situation; as she evidently grew weaker and weaker. My feelings were now so acute as to stagger my judgment: and I requested the assistance of some medical friends. Her bowels having been torpid since the last purgative, and suspecting worms, some assafoetida glysters were advised and administered at different times through the day; and a blister was applied

between the shoulders to relieve the head. Towards evening, she grew so alarmingly ill from the cough, unequal breathing and puffing of the belly, that five grains of calomel were administered, and followed up with two large spoonfuls of castor oil, some hours after at different times. Stimulating cataplasms were likewise applied to the feet. The blisters were dressed about the time the cataplasms were removed, and she had a respite of two or three hours of rest. During the night, she had a large faecal discharge with the fætid glyster. The cough was somewhat relieved; but the pulse continued variable and unnaturally slow. It was remarkable that, notwithstanding the stimuli of the blisters, the cataplasms and the fætid glyster, besides several glasses of pure wine, there was no excitement in the arterial system, or heat on the skin. These symptoms, although ambiguous, might still be considered as proceeding from worms.

29th. The stupor continued although the pulse was not quite so variable: it was still however below the natural standard. A powder of rub. ferri, pulv. rhei and calom. ana gr. v. was given, and about two hours after, there was such a conflict between the disease and medicine, as was very alarming. She had a large stool which so sunk the powers of life, as wine and vol. frictions could scarcely recal. A blister was now applied to the epigastric region, and nourishment and wine administered frequently. The pulse soon became more regular, but still below nature; the skin cool. In the evening she had a large slimy stool; and had some hours of natural rest after having the blisters dressed. About ten o'clock, she grew restless and uneasy, with a slight return of cough. Two grains and a half of calomel and five of rhubarb were now given, and to be repeated towards morning if necessary. The first dose created some sickness at the stomach, which, in her very weak state, distressed her much: a glyster was therefore thrown up, which procured another slimy stool, and in two or three hours, she had a little rest.

Towards five o'clock in the morning of the 30th, she had another stool, dark and slimy. There was now a greater degree of warmth on her hands and feet than had been felt from the beginning: pulse the same as before. By moaning and sighing, she expressed great anxiety and debility. About eight A. M. her blisters were dressed, and tepid sponging with vinegar and water was used, which produced a little quietness and rest. Beef-tea, with table salt, sago, gruel, and wine, were freely administered. Soon after she had another slimy, dark stool. Symptoms now grew so alarming, as to create a strong suspicion of hydrocephalus internus. The shutting of her eyes, which was before attributed to coma, was now plainly discovered to be owing to the disagreeable effect of light. There were added to this symptom, a perpetual sighing and moaning, with long and interrupted respirations, an incessant motion in the left arm and leg, with frequent pointing to the head, and a much greater irregularity of the pulse than had been yet discovered. She was likewise quite inattentive to every thing that was said to her. To mitigate these symptoms for the present, five drops of laudanum and ten of æther were given to her, after letting her sit in the femicupium for a few minutes. During the effect of the opiate, her head was shaved, and a large blister applied, after rubbing the scalp well with camphorated rum. Mercurial frictions were now vigorously adopted, and five grains of calomel were given about nine o'clock in the evening. From the opiate and friction, the pulse was now more equal and full than it ever had been; and she remained pretty quiet and easy until ten o'clock; when another strong friction was performed, and an antimonial opiate, (twenty drops of the wine to ten of the tincture) was administered. This had no effect until past eleven, when she fell asleep. She rested until five o'clock, but moaned and sighed very frequently.

30th. After day light, it was discovered she had lost the use of the upper eye-lid; but opened the other as she had done for several days before, only to shut it immediately against the ef-

fest of light. During this afflicting scene, the poor little sufferer astonished every beholder in the discovery she made respecting the affected eye, by placing her fingers on the right eye, while she stretched open the left; which she could not accomplish before she had shut the right! The motion of the left arm and foot remained the same. Had no extraordinary motion in the right. Was perfectly sensible. The mercurial friction was repeated this morning, and a stimulating glyster, with Epsom salt was administered, which gave her two large, glaucous, brown motions; after which she opened her eyes better. The pulse was fuller and more frequent, with more heat on the extremities. The pupils, particularly the left, much dilated for the first time since the commencement of her illness. The glyster was repeated about ten o'clock, A. M. from which she had another discoloured motion. A solution of the Epsom salt in a strong beverage equally saturated with sugar and lime juice, was now given by a spoonful at a time every half hour, until she had an healthy-looking stool, about two o'clock, P. M. and another of the same kind within an hour after. She was now more observant; called for what she wanted, and was more tranquil. A large blister had been renewed to the head which about this time shewed signs of discharging; it was suffered to remain on till night. Her nourishment, gruel, and beef-tea made palatable with table salt. Her pulse was regular and full; her skin temperate; but the pupils still dilated. She had several stools of nothing but the nourishment she took. She became a little restless towards bed time; and she took three drops of laudanum, and six of antimonial wine.

November 1st. Slept without moaning, and the blister discharged plentifully in the night. There was little or no affection of the left arm and leg; but the left eye was still half closed, and both pupils enlarged. The mercurial friction was continued and an infusion of bark was given. She lay quite passive all day, took nourishment when given, and had two small

natural stools. Towards evening she seemed much inclined to doze and sighed a good deal. The pulse was rather tending to variation from a seeming retardation of one pulsation now and then. A blister was applied to the occiput and neck after a mercurial friction. These symptoms increased with a febrile heat and interrupted respirations, which seemed at times to be almost entirely suspended. These were attended with heavy sighs and deep alternate groans. The right arm and leg became now affected in the same way as the left were some days ago, with alternate flushings of the face. The antimonial opiate (twenty drops to ten) was given about eleven o'clock at night, which by degrees subdued all these, apparently indomitable, symptoms into a sleep which brought her to the

2d. With a regular pulse at 116. She has not spoken since yesterday noon; and that was very faintly, although she has been perfectly sensible; for when she heard the sobs of those around her, when they thought her dying, she opened her eyes and looked steadily at them for some time. The powers of life seem wavering—the hands and feet continue hot, while every other part is temperate. Though the pupils seem somewhat less, the eyes have lost their lustre considerably. There is a rattling phlegm in her throat when she coughs, which is now but seldom. There were ordered two grains of pulv. scillæ, one of calom. and six drops of the tinct. digitalis, with a mercurial friction. At ten o'clock the pulse rose to 120. Six drops more of the tincture: in less than one hour the pulse fell to 100—full—somewhat variable. Lies quite passive, and sighs frequently. Pulse rose again in ten minutes to 120. At twelve o'clock there was a general moisture. She had passed some urine. The dose was repeated, as at ten o'clock. At two o'clock P. M. the pulse was at 135. She had passed more urine and was tranquil. Eight grains of tinct. digit. were given in beef-tea, and another mercurial friction applied. Had a large dark stool at half past three P. M. pulse 135. A purging glyf-

ter gave her a large motion, and she sunk into an easy sleep immediately; during which the pulse sunk to 112, at five o'clock P. M. At six o'clock pulse 120. Repeated the calomel and squills, with ten drops of the tinct. digitalis. At seven o'clock the pulse 103. Slept, after the fatigue of dressing her blisters, for two hours. A mercurial friction about eight o'clock. She grew a little restless soon after. Pulse 130. Had two pukés which might have been occasioned by increasing the squills to four grains. She was easy after it; and she fell asleep with the pulse at 116; and slept without interruption, but from nourishment, till almost twelve o'clock; when the symptoms which hitherto required the antimonial opiate began to appear, with a small pulse at 136, and alternate flushings. This hitherto powerful medicine was given in the same proportion as last night.

3d. She rested tolerably well, and was awakened to take nourishment. No flushing to-day; pulse 132; skin warm; had urined once; medicines continued. At ten o'clock A. M. she was so sick at stomach, as to have nearly fainted; pulse 120; a little toast and water settled her stomach, and she enjoyed some rest. She is averse from nourishment to-day; owing probably to her mouth being affected by the mercury. Had a slimy stool about one o'clock P. M. more general heat than usual; pulse 125. There is no strabismus; but the globes are directed more to the left than usual. The pupils seem somewhat contracted and sensible of the light. About five o'clock P. M. she had a large loose stool, which contained several leaves of a green resembling spinach, called in Jamaica, Caliloo, undigested. This was one article of which she ate on the nineteenth of October; took very little nourishment to-day; had another small stool at nine o'clock; attempted to give her the bark infusion with spiritus minder. but she could hardly swallow; breathes with some difficulty; pulse 130, regular. At half past ten o'clock pulse 145; more difficult breathing and swallowing. At eleven, pulse 150; administered a bark glyster, with

the antimonial. In ten minutes after, the pulse was 130, and breathing better. Two other attempts were made to throw up glysters; but they were ejected immediately. There have been several contractions of the ankle and wrist of the left side to-day. The pulse was fluctuating between 120 and 130. The antimonial was continued.

4th. The pulse 112 at five o'clock A. M. with an open skin and easy respiration. At six o'clock she had some nervous twitches in the muscles of the left cheek, while the arm and leg of that side were drawn up involuntarily. At these periods the pulse varied considerably. A stool gave some respite to symptoms; a purging glyster was thrown up without any effect but flatulence. The convulsive affections of the extremities and left cheek continued to recur, with increase every five minutes through the day, with additional quickness of pulse, even to 170.

My medical friends had taken leave since yesterday, and I was in a state of mind not to be described; however it suggested cupping. But unfortunately glasses could not be procured. I then resorted to musk merely to smooth the rugged path to death by convulsions. The musk and antimonial were continued the whole day, during the short intervals of the convulsions; and about six o'clock P. M. they were less frequent, and she shewed some disposition to sleep. I therefore resorted to the antimonial opiate once more in the proportion of six to twelve drops of the laudanum and antimonial. She was quiet for more than an hour; had no spasms, and turned herself with more freedom.

Nourishment and the drops were instilled through her teeth, which the weak powers of deglutition now and then sent into the stomach. The pulse averaged 150. At the same time as usual, the turn of the night, she grew worse, sighed and moaned; when twelve drops of antimonial wine, and six of laudanum were given which prevented a return of the convulsions. She had

some flumbers; and between whiles, two or three injections were given, which relieved her of considerable flatulence and some slime from the bowels. There were opiate frictions applied to the belly.

5th. Pulse 152, equal; a very small degree of contraction in the pupil. She moaned a good deal, as if from uneasiness in her bowels. An asafætida glyster was given, which was soon discharged with a considerable yellow tinge. Another was thrown up warmer which she retained about half an hour. Considerable symptoms of uneasiness led to the application of warm cloths to her belly. The glyster was discharged with the same appearance as the former. She was somewhat relieved; but moaned considerably. A tea-spoonful of gin in warm toddy was given, and another fætid glyster with ten drops of laudanum. At two o'clock P. M. pulse 148, regular and stronger; still moaning; took calomel grs. iij. aloe grs. ij. At four o'clock she passed the last glyster with some greenish fæces. She was quiet and slept till past five; deglutition better; took some nourishment; grew uneasy again between eight or nine o'clock, which was probably occasioned by the purgatives she had taken: however, the friction for some time of a hand over the abdomen, composed her again. Finding that the friction by a hand alone gave ease, the size of a nutmeg of mercurial ointment was rubbed in all over the surface of the abdomen in the direction of the colon, which in about twenty minutes procured a large stool of brown excrement and glaucous matter. She took some nourishment and went to sleep.

The hands and feet, which have hitherto always much exceeded the temperature of the body, have this day shewn some signs of amendment, by being equally temperate with the rest of the body. Pulse 160; she grew restless at the usual period of midnight; when the left foot grew hot, with some approach to spasm on that side. An injection brought away another

stool, and she was easier before one o'clock in the morning. There was observed a slight degree of inflammation on the sclerotica of the left eye during this day. She had but little sleep; pulse 170; a coldness of both feet now took place extending soon as high as the knees. In half an hour this was succeeded with heat in the left foot, and stiffness in the left arm, accompanied with great restlessness. Musk was given in her nourishment which was swallowed without difficulty.

At one o'clock in the morning of the sixth, all the left side was affected by spasm, which was relieved by a glyster, and she lay composed till past two, when she was attacked in the same manner, and another glyster thrown up. This remained till about three, when she passed it with some bloody mucus. From this time she was lulled till half past four; when, on the return of great restlessness, the antimonial opiate was given as last night. This procured about an hour's respite; after which there was a general tendency to spasm, with much anxiety, tossing and coldness of the feet; to which frictions and warm flannels were applied. At eleven o'clock the pulse was 200; her blisters were dressed; not much restlessness now; but respirations very frequent; no spasms have appeared lately; the mercurial frictions were continued; her belly, legs and feet were fomented for an hour or two with warm bark decoction to incite the return of heat; but the powers of life were not now to be recalled. She expired at nine o'clock in the evening!

Upon opening the head, the blood-vessels appeared much distended; but there was no extravasation or serous effusion between the membranes. Upon removing the membranes, the fulness of the vessels on the surface of the brain, exhibited their ramifications in a most beautiful manner; and upon cutting through the corpus callosum there were found between three and four ounces of a pure limpid fluid. This was sufficient to account for the death of the child without going further.

From these appearances we may reasonably presume that, had the disease been suspected in its first stage, there might have been some probability of success from lessening the quantity of blood in the head, either by leeches, arteriotomy, or cupping, and by the early use of blisters and setons, accompanied by the powerful effects of mercury.

Two of these remedies were vigorously persisted in ; but, alas ! at too late a period, although they were applied two days before any dilatation of the pupil took place. Even their late use evinced their power on the disease in a very striking manner.

Improper indulgencies in diet may be considered as pre-disposing causes of hydrocephalus internus ; for an healthy state of the stomach is absolutely necessary to a proper discharge of all the animal functions. It is true we are not sufficiently acquainted with the functions of the brain to account for the production of its diseases ; but we know that its structure is so wonderfully fine, as to be easily affected by the derangement of the fountain of health, the stomach ; especially if other causes operate at the same time ; as was the case in the present instance. Much might be said upon this part of the subject ; but it is sufficient to remark, that we are too apt, if a child is generally healthy and endowed with good digestive organs, to let affection outrun judgment, in giving what ought to be denied to its utmost importunities. Such gratifications are fraught with disease. But, besides the benefit that a resolute conduct in this respect would afford to health, a proper restraint is wholesome in a moral sense ; in teaching children obedience and habituating them to early self-denial, which will arm them against many future mortifications in life.

Before and on the nineteenth of October, there was neither "heaviness of the eyes, nor diminution of nervous energy, nor drowsiness," nor, in short, any of the other symptoms which

distinguish hydrocephalus, or indeed any other complaint. On the contrary, full and blooming health prevailed in an eminent degree; so as to be particularly remarked by the family, with whom that day was spent in the country. Being thus lulled, as it were, into security, the child was caressed and suffered to eat perhaps of improper things at a much later hour than usual to her. She was brought home late; and it was a rainy evening. Under such circumstances the treatment during the former period of her illness was certainly rational, though unfortunate. When the symptoms became more characteristic of hydrocephalus internus, it occurred to me that she had a fall some five or six weeks before; which, having left no signs of lesion whatever, had been entirely forgotten. None of her numerous connections had been ever subject to the disease: so that there can be no room to lay this disease to constitution. Her head was rather of the smallest size, with a very compact bone.

Here a query naturally arises, viz: could water collect in the ventricles of the brain, to the quantity of more than three ounces in so short a time as eighteen days? Or could the fall be the cause of the disease, without shewing some symptoms of it before the twentieth of October which was the first day of any illness? In the first instance, obstructed perspiration from cold, when that evacuation was copious after a full meal, might probably have laid the foundation of the disease on the evening of the nineteenth; when the further aid of deranged stomach and bowels might have contributed towards its progress, by destroying the balance between the exhalents and the absorbents. And, if it be true, as the sagacious Rowley observes, that vomits contribute much towards producing the dropy of the ventricles of the brain, the accumulation must have been accelerated in this case by the treatment at first. If a fall was the primary cause, the high health which the child enjoyed after the accident must have retarded the formation of the disease, until the above morbid actions took place; and these would probably seize on that delicate part which had before suffered concussion.

Since the termination of this case, I have perused Dr. Rowley's ingenious treatise on hydrocephalus membranarum with much pleasure and information. He says that it generally precedes hydrocephalus internus. The Dr. mentions several symptoms that did not occur in the above case: but as the drowsiness and listlessness to action occurred in the beginning, as he mentions; it may be asked could the dropsy of the membranes be changed into that of the ventricles without having any marks of the first disease to be seen on dissection? Or may not drowsiness or listlessness to action, accompany a morbid state of the stomach and bowels; or a case of worms? It appears from the above case,

1st. That diseased action of the stomach and bowels, and obstructed perspiration may prove the proximate cause of *hydrocephalus internus*.

2dly. That *hydrocephalus internus* may be occasioned by concussion.

3dly. That *hydrocephalus internus* did not exist before, but must have commenced on or after the nineteenth of October; when, the powers of health being abstracted, any injury formerly sustained, might have commenced its action on the brain.

Although *hydrocephalus internus* has been very correctly described by several eminent authors; it appears that the disease has been too often overlooked in practice on account of the similarity of symptoms with other diseases incident to children. I must confess that I have considered it as a rare disease, until the fatal termination of this case, which came so home to my feelings, as to induce me to look back with regret on several cases in which I might have overlooked the disease.

Happy would it be for mankind, if each individual would profit by the consideration of the errors he has committed either in theory or practice. Severe as the sacrifice may be considered to the feelings of human nature, I should be happy could I be assured that the record of a case which has deprived me of the endearments of a beloved and most promising child, may be the means of information to myself, or comfort to other parents, in warding off the fatal stroke from their offspring!

I cannot but lament the general repugnance that prevails here among medical men, to inspect bodies after death; as it is the only true source of information, and ought to be an unvariable rule with every practitioner, when he cannot clearly ascertain the cause of death, strongly to solicit for permission to search for it by dissection. Such general conduct would evince to the world that the love of information and improvement in the art of preserving life was of much higher consideration in the minds of medical men, than the accumulation of wealth.

As all the means, to the best of my knowledge, which have been recommended by others, have been unsuccessfully tried in the above case; it only remains to say, that this fatal disease may be much easier prevented than cured. Indeed if means of prevention were more studied by practitioners and parents, there would be less occasion to prescribe remedies for the cure of infantile disorders in general.

The precepts laid down by Dr. Rowley, respecting children, at the end of the work already mentioned, are judiciously adapted to all capacities, and ought to be generally studied.

Scarifying the gums has been objected to by some practitioners, under a false notion of producing a cicatrix firm enough to impede the progress of dentition: but when Dr. Rowley forbids this operation to be performed "too early," his caution

cannot be considered as favourable to that opinion; for experience confirms that, when the swelling and inflammation evidently shew that one or more teeth are at hand, the only mode of giving instantaneous relief from any violent symptoms threatening convulsions is, not only to open, but to take off a portion of the gum down to the advancing teeth.

Opinions may sometimes lead to improvement; but, when experience has established a fact, opinion should yield; because in founding a practice on this, without being sanctioned by the other, we certainly lead ourselves and others into much dangerous error. The experience I have had in the good effects of mercurial preparations against malignant fever, and in diseases of children, induces me without hesitation (whatever violent condemnations have been uttered against them,) to recommend the practice in the early stages of those (if neglected) most dangerous affections in both periods of life.

Both malignant fever and hydrocephalus internus, in their advanced stages, seem to resist the power of mercury in a similar degree; but both, I presume, may be prevented or obviated in their fatality, by the powerful agency of this medicine on the system, before the torpor, which these diseases create, takes place too firmly on the animal functions, and thereby renders its operation inert. In the same manner therefore as I have advised (see Medical and Physical Journal, volume ix) all who may be obnoxious to that fever to prepare against it, do I now recommend calomel to be frequently given to children, to guard them against hydrocephalus internus: for it is to be feared that this dire disease is more fatal to them than is generally suspected; and that, from the similarity of symptoms, the cause of death is too often attributed to worms or some other imaginary disease.

I have only to add that, as I have always kept an eye of suspicion on every fever, attacking a stranger to this climate, ever since the commencement of this scourge to the West Indies in

1794; I have found that a prompt and vigorous practice at the beginning had a decided advantage, when malignity, although not at first suspected, supervened in a few days. So it may be with hydrocephalus, if symptoms are in the least ambiguous; for, if the case should be either worms or infarcted bowels, the mercurial treatment recommended in hydrocephalus is equally applicable to these. Evacuations from the head will depend upon circumstances attending the state of the sensorium.

An Account of the Efficacy of a Salivation, in curing Pulmonary Consumption, in a Letter from Dr. MAXWELL M'DOWELL, of York-town, in Pennsylvania, to Dr. BENJAMIN RUSH.

YORK, November 6th, 1805.

DEAR SIR,

IF you should be of opinion that the following case of phthisis, which yielded to the powers of mercury, will contribute its mite towards establishing a confidence in a remedy, at present unpopular, you are at liberty to make what use of it you may think proper.

Mr. D. aged about thirty years, whose thorax is of a structure favourable for the production of pulmonic complaints, observed his health gradually declining for the last two years: he at length became so much alarmed at his situation, as to send for me on the tenth of September last. I found him very much emaciated and labouring under a distressing cough, with a moderate purulent expectoration. He had profuse night sweats; his appetite entirely gone; his pulse was small, frequent, and feeble. I left six of your "antimonial powders" with him. On my next visit to him, he told me he could not take the pow-

ders, as they were so very unpleasant to his taste. I then furnished him with a few papers, each containing three grains of calomel, directing him to take the contents of a paper three times a day. I requested him to drink cold water, or water with a toast of bread in it. On the 17th, he complained of soreness in his mouth;—19th, a copious ptyalism, and his cough removed;—25th, a concentration of disease in the glands of his mouth. By means of the officious interference of some benevolent old ladies, who lay claim to a large portion of *experience*, my patient now became dissatisfied with his sore mouth, and I believe was upon the point of dismissing me. I entreated him to consider that his cough had left him; that he had no night sweats, and that his appetite was considerably restored. I endeavoured to make him acquainted with the manner in which the sore mouth would remove his original disease. My arguments, however, were not sufficient to remove the fears which had been raised in his mind, and he insisted upon having something to cure his mouth. I gave him some flor. sulphur; but prescribed it in such small quantities as would not be likely to lessen the mercurial disease in a short time;—29th, he informed me that through the importunities of his female visitors, he applied to a physician in town, who gave him a wash to cure his mouth. He had applied the wash only once, till he began to reflect upon what I told him respecting the operation of the mercury. He now expressed a willingness to submit entirely to my directions, and let me determine when his mouth was to be healed. His mouth was something better, and I was apprehensive that the quantity of sulphur which he had taken would remove the mercurial disease before his lungs could be restored to a healthy state;—though he was willing to let his mouth remain in its present situation as long as I thought necessary; yet he would not permit me to increase its soreness.

October 7th. His mouth was well; he felt a slight pain in his breast for two or three days which then disappeared, and he has, ever since, been perfectly free from all pulmonic complaints. I requested him to procure a flannel shirt and wear it the ensuing winter.

November 6th. He says he is at this time, in better health, and more fleshy than he has been for seven years.

With due respect and esteem,

I remain your humble servant,

MAXWELL M'DOWELL.

An Account of two Cases of Dropsy, cured by the Loss of Blood, extracted from a Letter from Dr. JAMES W. WALLACE, of Fauquier County, in Virginia, to Dr. BENJAMIN RUSH. Dated December 16th, 1805.

1802. **K**EMBLE, aged fifty-five, after much exposure to cold and wet during the winter, was early in March attacked with the usual symptoms of dysentery: but not in violence sufficient to confine him to bed. Bloody and mucous stools, tormina and tenesmus continued about five weeks, when they gradually subsided; but a colliquative diarrhoea followed, occasioning great emaciation and debility.

About the beginning of May, he discovered an abdominal increase, which about the middle of June had arisen to as complete an abdominal dropsy as I ever saw. I have by the operation of the paracentesis of the abdomen, from patients not more swelled, obtained, I think, fully thirty pounds of water.

At this time I was called to him; after some hours conversation, in which I explained the nature of ascites, he refused the use of all internal remedies—adding he never had, nor would ever take physic. After some persuasion, he consented to the loss of blood. His pulse strongly indicated that evacuation. I drew twenty ounces, which exhibited a buffy surface. He was sensibly relieved in his feelings; and that night discharged more urine than was usual for him to discharge in forty-eight hours.

The next morning I repeated the bleeding, the blood buffy; when I left him I directed the loss of sixteen ounces every third day until he should lose three pounds more of blood; my directions were complied with.

The third week after I left him he visited me on horse-back, thirty miles distant from his dwelling, not a symptom of dropsy remaining; he had not recovered his fat, which however he did in a few weeks. He observed to me, that the secretion of urine continued to increase until it disturbed his sleep.

Mrs. ———— aged 45, was in April last attacked with symptoms of universal dropsy. She was swelled literally a capite ad calcem; in this state, her catamenia flowed immoderately for ten days; she took no remedies, not even the teas so liberally prescribed by her sex on all occasions. The dropsy entirely disappeared; her urine was discharged in full quantity upon the appearance of the hæmorrhage.

Mrs. ———— as is usual at her age previous to the entire cessation of the catamenia, has menstruated irregularly for the last twelve months.

In July the hydropic symptoms returned and increased until the middle of last month; when I was called to her, and found her head, abdomen, superior and inferior extremities very much

swelled. She could not walk across the room without losing her breath; pulse tense and hard; urine scarce; very costive, and an immoderate uterine flux: as in the case of Kemble, she refused all internal remedies; and even bleeding.

In this situation she lay eight days without the aid of any remedy. I was again called to her and found every hydropic symptom removed; her breathing though quick was free.

The uterine hemorrhage still continued; and I had then to use every art to restrain it—which was successfully done by an astringent injection, which has never failed after the phlogistic action is removed.

Case of Worms in the Urinary Bladder. By Dr. MATTHEW WENDELL, of Albany, New York.

SIR,

SHOULD you deem the following case of *worms* in the urinary bladder, worthy insertion in your useful Museum, the credibility of which can be attested by several medical gentlemen of the first respectability, you are at liberty to publish it.

C. Delamatter, Esq. of Hudson, (New York,) aged 51 years, of an industrious and regular mode of life, and habit of body, was about the 12th of August, 1803, suddenly attacked with symptoms of strangury, voiding small quantities of urine, with repeated inclinations, attended with itching and some pain in the glans penis. These symptoms continued without evident increase or abatement till the twenty-ninth; when he was taken with a sharp

stinging pain in the left ilium, which he described as passing through from the lumbar to the hypogastric region, in a direction from above, slanting downwards. With this pain the strangury increased; at evening, the pain had extended over the abdomen and breast, occasioning anxiety and some difficulty in breathing.

30th. I was requested to attend. He had passed a restless night, attended with partial perspirations; complains of headache; anxiety about the præcordia; great depression of spirits; thirst not great; appetite indifferent; state of the bowels regular; strangury as yesterday; pulse weak, at 60. Ordered opium one grain, every three hours; warm flannel applications to the abdomen; to drink freely of diluents and diuretics, as weak broth, or infusion of parsley.

31st. Had rested well; anxiety removed; perspired freely during the night; had voided a considerable quantity of turbid urine; his appetite is better; thirst as usual; and the pain in the ilium remaining as before; ordered a continuance in the above prescriptions.

September 6th. Was called again. The strangury was increased considerably; pain in the ilium still remaining; pain in the left side; a frequent dry cough; pulse natural as to frequency though reduced in force; in other respects as usual.

7th. Had slept well; cough abated; strangury relieved; pain in the ilium as usual.

10th. At night the pain removed gradually from the ilium, and ischuria supervened.

11th. Severe pains with distention of the abdomen; introduced the catheter without any sensible obstruction, and evacuated a full quart of a clean citron-coloured urine.

12th. At night introduced the catheter again; and after evacuating about one pint, the flow of urine suddenly stopped. He immediately remarked that something had entered the catheter; as the sensation he experienced was similar to that of a worm creeping and occasioning a tickling in the parts, together with a severe pressure which caused great pain. On withdrawing the catheter and knocking it forcibly in my hand, a substance fell out of a round figure between seven and eight inches in length, of the thickness of an ordinary-sized catheter; this substance was of a dark red colour, very elastic; at one extremity it was thicker than at the other, and within an inch of the small extremity it appeared lacerated; its large extremity was firm and round. The patient complains of a tickling sensation in the urethra, and is confident of similar substances being still in the bladder.

13th. Had rested tolerably; the ischury removed, and the strangury as before the 10th; had voided without much pressure during the night, near one pint and a half of urine. At three o'clock introduced the catheter again; the same effects followed. On examination, two substances, the one about four and a half inches, the other near three inches in length, of a colour similar to the above, with whitish streaks. They have the shape and appearance of the worm, *lumbricus* species. The one is perfect, with a white circle within half an inch of the large extremity, and somewhat elevated, its large end firm and round; its small end flat and depressed. He could plainly distinguish his sensations on this occasion, and observed that two substances had entered the catheter. In consequence of the severe pressure this day, he was taken with the hæmorrhoids, and some fever. Nine o'clock, catheter introduced again with the same effects as in the afternoon; he again mentioned that two substances had entered, occasioning great pain, &c. On withdrawing the catheter, two substances similar to the above were observed.

14th. Catheter introduced again, and discharged near five gills, with a similar substance.

15th. Had the orifices of the catheter enlarged in an oval form; introduced again, with the same appearance somewhat lacerated. During last night he had voided without much pressure half a pint of urine; in this was observed a substance as above. Having introduced the catheter thus enlarged without any appearance as above, and the patient urinating tolerably free and easy, I concluded that there were no more of those substances in the bladder.

17th. The strangury entirely removed, and in every respect well, though weak.

In the above statement I have omitted mentioning the prescriptions since September 6th, as they were those which were suited to the different indications, and of approved authority.

The uncommon occurrence of cases similar to the above, must apologise for the minuteness of its relation; and to remove all doubts with respect to its credibility, I have in my possession at present one of the worms, perfect in every respect.

Reflections on the above Case.

The lumbricus or round worm, is one of the species of worms, which is, at times, found in the human intestinal canal: Whether they are to be considered as interlopers, whose presence can on all occasions be dispensed with; or whether "they are kindly sent by nature, to prevent diseases of excessive nutrition," is not for me to determine. Their generation, from ova in the intestines taken in, either by the mouth or some other way; their maturation by the heat of the intestines and neighbouring parts, and their support and nourishment from the chyle and other fluids, being taken for granted, the above case of Mr. D. pre-

sents matter for speculation; which may be reduced to two propositions.

1st. That these worms were originally ova, taken up by the absorbents and deposited in some part of the left kidney, and there matured : Or,

2d. That being matured in the intestines, one more intrepid than the rest, "pursuing his labours in his own way," without too much regulation, formed a passage for himself, and the others followed. The first of these propositions, from physiological deductions, cannot obtain; for to trace in imagination those ova absorbed by the lacteals, now mounting the thoracic duct, then emptied into the subclavian vein, now performing the lesser circulation, and finally deposited in the kidney, and there matured, in mad opposition to the absterfve quality of the urine, and to the free passage thereof, appears rather problematical. And this more especially as we can with greater ease, and of course more rationally, at least in supposed cases, account for their appearance by a few corollaries founded on our second proposition. "As the colon is connected to the left kidney," could not these worms have made their passage this way? Was not the stinging pain experienced by the patient for near two weeks without intermission, indicative of this? Were not these worms the cause of his dry cough, head-ache and anxiety, and indicative also of their presence in the intestines? These worms are extremely elastic, for they passed through the small holes of a common sized catheter, and recovered their form again. Was not the vermicular motion so distinctly observed by the patient, indicative of their being alive in the bladder? Could not the first have produced the ischury by its entrance into the urethra, and on the introduction of the catheter, been forced back and occasioned its laceration? This possibly may be objected to, by reason of the serious consequences attending it; but are there not repeated instances in which pins, needles and other hard substances have been swallowed, and after some

time penetrating the coats of the intestines, and making their way through the parietes abdominis. Again, when we reflect on the circuitous rout which they must have taken, in case of admitting the first proposition: how liable they were to be deposited in some other parts, or thrown off by some other outlet: when we reflect on the great quantity of blood sent to the kidneys, and its greater fluidity, of course its absterfve quality serving to wash away substances much larger than those ova could have been; and also on the non-nutritious quality of the urine; all these considerations militate against the first proposition, and tend by analogy to establish the second. Could not their presence in the kidney, by sympathy have produced the symptoms under which he laboured? At the time of their exit from the kidney, through the ureter, was not this the cause of the ceasing of the pain in the ilium? Was not their presence in the bladder the cause of the ischury?

MATTHEW WENDELL.

DR. JOHN REDMAN COXE.

Case of Worms, &c. discharged from the Stomach. By Dr. CLEMENT STANFORD, of Wicomico Lower Ferry, Somerset County, Maryland.

November 26th, 1805.

SIR,

IN compliance with a circular letter received from you, dated July 11th, 1804, I now take my pen to give you some small information, of what, in my opinion, is an uncommon case.

In the latter end of September last, I was called to see Mrs. P. R. a married lady of a creditable family, of about twenty-eight or thirty years of age; who informed me that she had not

been right well for several years, but at that time complained particularly of slight chills, a sick stomach with vomiting, high fevers with pains in her head, and frequently with considerable pain in her stomach, and that she had often vomited a number of small round worms, which I supposed to be what are generally called the true stomach worm, for which I advised an emetic, afterwards a mercurial purge, and then bark with elixir of vitriol.

Upon my second visit, I was informed that the emetic had operated well, and that she had vomited a number of black bugs, and some worms, which brought me to a strict inquiry of the patient and her attendants, by whom I was informed that she had been in the habit of vomiting of bugs in likeness to what is called a black bes, but smaller, for eighteen months back.

The worms were of different descriptions, some having legs, and were striped crosswise; others were white with black heads. She also informed me that she has had for five years back, an obstruction in her menstrual evacuations. As her constitution appeared to be very strong and the habit full, I concluded to give mercury in such a manner as to bring on a salivation, in order to produce a revulsion; and thinking that it might have some effect in the destruction of those stomach inhabitants, (if I may be allowed the phrase) it was accordingly done and kept up for three weeks; afterwards gave the bark and steel. She now appears to be better; as she strengthens, her menstrual discharge increases.

A few days ago she consented to take a vomit to see if there were any more of those bugs remaining, (in presence of her family, a gentleman of respectability, whom I purposely took with me, and myself,) when we procured from the contents of the stomach, one of the bugs of a smaller size; which upon examination was found to have wings to be put out and taken in, similar to the tumble-bug; one of the white worms with

legs, the small end of which, appeared, by its crawling, to be the head, with a black spot on it ; and several flies, some of which, as soon as they could get their wings dry, would fly away. I have sent you several for your inspection. You are at liberty to make any use of this that you, in your superior judgment, may think necessary. Query—Whether or not are those animals naturally formed in the stomach ; or are they first taken in with the water and then generated in the stomach ? If there is any other information wanting on this subject, you will signify it by letter, and I will give any satisfaction that is in my power.

I am, Sir,

Yours, with respect,

CLEMENT STANFORD.

P. S. If this case should appear doubtful, the affirmation of the above gentleman can be procured.

C. S.

DR. JOHN REDMAN COXE.

☞ One of the insects forwarded, appears to be of the family *Gibbosa*, in the genus *Staphylinus*. The worm alluded to seems to be the larva of the above. The bug is probably of the genus *Chrysomela*. The former of these feeds on carrion. These insects are deposited in Mr. Peale's Museum.

Editor.

Case of ruptured Uterus. By Dr. WILLIAM DEWEES.

Philadelphia, 6th Feb. 1806.

DEAR SIR,

I ENCLOSE you a case of ruptured uterus, with a few observations. Should they prove of sufficient importance, they are much at your service.

I am, Sir,

With sincere esteem,

Yours, &c.

WILLIAM P. DEWEES.

DR. JOHN REDMAN COXE.

On the 18th September, 1796, at three o'clock in the morning, I was called to the wife of Anthony Secane. She had been taken in labour about six o'clock the preceding morning with her third child. The account I received on my arrival from the midwife, was, "that her labour began regularly and smartly; that the presentation was natural; the mouth of the uterus dilated kindly, and the waters had escaped about an hour after her arrival; that from appearances, she expected delivery would have been effected by o'clock, (that is about two hours after its commencement); in this she was disappointed; the pains continued with more or less violence all day, and the succeeding night; that towards morning, (twenty hours after the labour had begun), she screamed out from sudden pain about the left groin, and upon examination, per vaginam, the child not be felt, though very easily touched before; a faintness succeeded, with severe puking of blackish matter; violent palpitations of the heart, great anxiety and restlessness." About an hour after these events had shewn themselves, I was sent for. I found her in the condition just mentioned, together

with cold extremities, profuse cold sweats, laborious respiration, and an almost imperceptible pulse.

From the symptoms present, and the account received from the midwife, I immediately suspected the nature of my patient's disease; and before I examined her, mentioned my opinion, and also the most probable consequence. I now proceeded to satisfy myself, and found my conjecture realized. The child with the placenta had escaped from the uterus, through a rupture at its left anterior part, just at its junction with the vagina, which was at this time sufficiently large to admit of the passage of my hand without the least difficulty; the uterus was situated just above the projection of the sacrum, and was contracted very firmly, and of the size it usually is at this period, after it has parted with its contents. The child and secundines were found lying in the cavity of the abdomen among the intestines; and never shall I forget the horror with which I was seized when I found my hand among them.

I took hold of the child by the feet, and delivered it immediately without the smallest difficulty; this I considered the only alternative; and this from the time that had elapsed, as well as from the nature of the accident, was less than a forlorn hope. The placenta was with equal ease withdrawn.

The puking with the other distressing symptoms still continued; she complained of excessive thirst; but the liquids she drank were instantly rejected; the pulse now was so extremely frequent as not to be numbered, and so small as scarcely to be felt. Her distress and anxiety were great beyond conception; calling upon all around, either to help or kill her. In this situation she continued until about seven o'clock, twenty-five hours from the commencement of her labour, and about five after the rupture of the uterus.

Leave was obtained to inspect the body, and my friend Dr. Physick, very obligingly assisted me in it. On opening the abdomen, several quarts of very dark bloody fluid were found in it; part of which was doubtless the blood that escaped from the lacerated parts, and the rest perhaps was an increased quantity of the fluid natural to this part, or portions of the peritoneum relieving themselves by effusion; together with a part of the liquor amnii, as we cannot suppose all escaped at the rupturing of the membranes. The stomach and intestines bore marks of high inflammation, and in many places approached gangrene. The whole lining of the abdomen partook of the same appearances.

The pelvis on examination was found faulty at the superior part, by a projection of bone or an exostosis; it was situated a little to the left of the symphysis pubis, and looked towards the base of the sacrum; it diminished the superior cavity of the pelvis in the direction of its small diameter about half an inch; it was sharp and pointed at its extremity.

The uterus was firmly contracted; its body and fundus participated in inflammation with the abdominal contents, while its neck, or that portion which constitutes neck when not impregnated, was in a state of gangrene, or perhaps sphacelus, excepting a small portion of the posterior part. The connection between the uterus and vagina was destroyed nearly two-thirds round; the laceration extended into the body of the uterus about an inch in its contracted state.

The projection of the bony process just mentioned, by diminishing the cavity of the pelvis, must be regarded as the remote cause of this accident. The child's head enveloped in a portion of the uterus rested against this point so long, that inflammation and gangrene were the consequence. The efforts of the uterus continuing violent; and perhaps that violence increased by

the difficulties which opposed them, eventually gave way, as its substance at this particular part was much weakened by the changes produced on it by inflammation; nay, the bony tumour acted somewhat like a cutting instrument. This unfortunate woman had been twice delivered by the crotchet, which from the nature of the deformity, was not necessary; and from the time that was allowed to elapse, not warranted on any principle of sound practice; as there was every reason to believe the children were alive when it was employed.

The nature of this deformity must have readily been discovered, had an examination been made of the superior strait, for it was immediately perceived when I introduced my finger into the vagina: nor did it exist in such an extreme as to indicate the crotchet, as there was still near four inches at this part of the pelvis, and consequently the delivery was not retarded by its smallness, but by the bad direction it gave the head; that is, obliging it to present too transversely at the superior strait, by which means one of the parietal bones, and that near its protuberance, must have rested on this bony edge, which of course would prevent its descent.

Had this woman's children been small, she might have been delivered naturally; or had the head presented with its vertex towards the right acetabulum, its direction with respect to the superior strait would have been so diagonal as readily to have passed this projection. I cannot however undertake positively to say the head did not in any one instance present in this way, but presume it did not, as the crotchet was employed in the former labours, and a rupture of the uterus was the consequence of the last; besides, this presentation is by no means as frequent as the one where the vertex is to the left acetabulum, not occurring once where the other does ten times.

Be this as it may, her children most probably, and herself most certainly, might have been saved by turning, for not the least difficulty was found in making the head pass the superior strait when I delivered the child from the abdomen; a proof of sufficient room was the head made to engage properly, or head reversed, for when we deliver by the feet, the head engages like a wedge, from a small to a larger diameter, and will pass very readily in this direction when considerable difficulty might be experienced from the other; another advantage to be derived from this change of situation of the child, is that we can constantly make the head obey a diagonal, or a completely transverse direction, either of which would, I trust, have saved the children and mother. In a pelvis of this kind I conclude the exclusive indication is turning.

I did not hesitate a moment to deliver my patient after I discovered her situation, though I proposed no success to her friends; death I thought inevitable in either case; from delivery there was a possible chance for life, from neglecting it none. The propriety of this reasoning however has been called in question, as it is conceived any attempts to save the patient, is but to prolong her misery.

No point of obstetrical practice is more unsettled than this; but why it is so, is difficult to say, since it may become obedient to rule, without the smallest difficulty, or involving in it the slightest doubt, or contradiction.

We have three principal directions on this subject: by the first we are told it is improper to do any thing, since it is conceived no effect can be availing; the patient is here allowed to expire without an endeavour to save her; of this class were the respectable Dr. W. Hunter, Dr. Denman, and some others of less celebrity. Dr. Douglass in a treatise on this subject has

combated this mischievous supineness so successfully, that it would be idle to say any thing more on this subject.

By the second, we are recommended to deliver as expeditiously as possible through the pelvis; this practice is sanctioned by more numerous, and not less respectable names than the first, among whom we may mention, La Motte, Levret, &c. This plan has a decided preference over the other, since it offers assistance, and some women have escaped from death by it.

By the third, we are taught to believe the woman has no resource but in the cæsaean section: this plan, agreeably to Baudelocque, was originally suggested by the ingenious but timid Levret, but in terms so indirect, as clearly shews both his knowledge of the subject, and the prejudices it would have to encounter.

Having thus briefly stated the various opinions of authors on this subject, I shall take the liberty to say, that either is wrong if implicitly followed; and to be right upon this subject requires the adoption of all three, as circumstances may require. It must however be remarked that, the first can never be followed without incurring the imputation of blameable timidity, except where the patient is absolutely in articulo mortis; here we may withhold aid, as nothing can benefit the expiring sufferer.

The second plan cannot be implicitly followed; for instances have occurred where the rupture was through the substance of the uterus; and as soon as the child has escaped either entirely or partially into the abdomen, the aperture is so much diminished by the contraction of the uterus as to render it impossible to deliver it through the accidental and natural passage. But, when the rupture happens, about the junction of the uterus with the vagina, which is by far the most frequent, and at the same time is not subject to the diminution of size just spoken of, the se-

cond mode is exclusively indicated, unless such deformity of pelvis is connected with it as would render the passage of the child through it impossible.

The third plan, I conceive, is only admissible, first, where the rupture has happened to the body of the uterus, and delivery through the vicarious passage, rendered impossible by its contraction. Secondly, where there is complicated with this accident, such deformity of the pelvis, as at once to forbid any attempt at delivery through it.

An Account of the Efficacy of the Acetate of Lead in Uterine Hemorrhage. By GEORGE E. MITCHELL, M. D. Sc. of Elkton, Maryland; communicated to Dr. JACOB D. WACKER, of Fredericksburg, Virginia. Transmitted to the Editor, February 13th, 1806.

DEAR SIR,

AS experience is the only true way to obtain a perfect knowledge of the virtues of medicine, I feel disposed to inform you of my experience of the efficacy of acetate of lead, in several cases of uterine hæmorrhage, which have occurred in my practice, since I left the university of Pennsylvania. Although I was induced to believe it a valuable implement in the hands of a physician, in this form of disease, from the encomiums of professor Barton, yet my experience has greatly confirmed that belief; it has also convinced me that a student of the present day, may put more confidence in the recommendations of our professors, than many of the ancient writers are entitled to.

I have had five cases of this disease, in all which, this medicine was prescribed with evident success; in several of these ca-

ses blood-letting was used as it was indicated by the pulse. The acetate of lead was used according to the urgency of the case. I generally commenced with one, two, or three grains, to be repeated every three or four hours, which always had the effect it was desired to produce. One case which was alarming and obstinate, and which had been treated with the common remedies in this disease, will convince you of its superior efficacy.

A lady of delicate make, aged 29 years, was seized with uterine hæmorrhage; her physician had properly prescribed according to the state of her system; blood-letting had been used several times. Astringent powders of sulphate of alumine and gum kino had been given every hour; proper local applications had been used without much apparent advantage. The woman was much reduced, and she, as well as her physician, was sensible that her complaint, if not soon checked, would terminate her existence. I was consulted in her case, and recommended the acetate of lead: this practice was novel to the attending physician; but he agreed it should be tried: I prepared a dose of five grains, made into a bolus, with mucilage of gum arabic, and gave it her with a determination to repeat it, if it was found necessary; but in one hour it was evident the pill had produced the desired effect: the hæmorrhage was stopped, and did not return; next day she was ordered tonic powders of rubigo ferri, and columbo, which soon restored her to her former state of health.

Another case I think proper to relate to you. On the 25th of July last, I was attending a patient in the house of a gentleman in this neighbourhood, and whilst performing the operation of blood-letting, the lady of the family came into the room; she was in perfect health; but soon complained the sight of the blood made her sick; she hastened into another room, and was immediately taken with a profuse uterine hæmorrhage. I was called in, and as she was far advanced in pregnancy, and the hæmorrhage alarming, I concluded her in very imminent dan-

ger. As soon as possible, I gave her about five grains of this medicine, which very soon produced the wished for effect. Since which, at the proper time, she has born a healthy child. I have used it with success in active, and passive hæmorrhage, without the assistance of any other remedy.

In the third case in which I have prescribed this medicine, I was alarmed to find my patient in a profuse ptyalism. I was accused of having used mercury, but conscious I had not given her any, could attribute it alone to this medicine. I recollected a woman in the Pennsylvania hospital, who was salivated by a few grains of the same medicine: if I remember aright it was given by Dr. Rush in epilepsy. Doctor James Archer, of Hartford county, informed me yesterday, that the same circumstance had happened to a patient of his, he, prescribed it for diarrhæa. I was not sensible of that disagreeable smell which is always the effect of mercury.

I have also used this medicine with success in alarming and obstinate cases of hæmoptysis. In none of the cases in which I used it, did any ill consequences follow, except the ptyalism produced in the third case. Indeed the experience of many who have used this medicine in large and repeated doses, and the many mistakes* which have been made with it with impunity, ought to dispel that improper timidity with which it is generally prescribed; and which often prevents its prescription, when it might be used with the most happy effects.

How valuable is that medicine with which the illustrious Rush, and others have cured epilepsy? Its efficacy (established by experience) externally, and internally, in many forms of disease, is sufficient to convince the most sceptical that it is a very valuable medicine.

I am, with high esteem,

Your friend and fellow student,

GEORGE E. MITCHELL.

* Vide, Medical Museum, Vol. I. page 101.

Favourable Result of the Case of Blindness detailed in the preceding Number of the Philadelphia Medical Museum. By the Editor.

THE very remarkable instance of blindness, caused by the entrance and fixation of a piece of tinsel cord in the eye, as detailed in the last number of the Museum, had scarcely been given to the public; when accident assured me of the return of sight. Three weeks had not expired, from the time of my examining the eye, (as I usually had done every few weeks, and) at which period vision was completely obstructed by the opacity of the lens or its capsule; when I received the pleasing information from the mother of the child, that he could certainly distinguish objects. On examining the eye, the opacity had entirely disappeared opposite to the pupil; but the milky appearance still continued towards the circumference of the lens. He could distinguish objects, and discriminate accurately between them, except when they were placed diagonally to the eye, when the rays of light consequently fell on the opaque part. I could also now distinguish the little figure formed of myself at the bottom of the eye, when looking into it;—and vision has daily appeared to improve. The opacity continues to diminish, and I can have little doubt, that a short time will entirely dissipate it. The slight irregularity of the iris is the sole perceptible defect, and that is evident only upon close examination. This wonderful recovery from blindness, after four months complete privation of sight, so totally unexpected to myself, cannot but prove pleasing to those who have perused the case, as it affords a proof of the salutary efforts of the animal economy, when aided by youth and a good constitution.

Philadelphia, Feb. 20th, 1806.

*Observations on Impregnation. By Dr. PEACHEY HARRISON, in a Letter to the Editor.**

SIR,

THE following observations on impregnation, were excited by the perusal of an Essay upon superfœtation, by Dr. William Dewees, in the Philadelphia Medical Museum. If they shall be deemed deserving of a place in that excellent publication, I shall regard it as an expression of public approbation in favour of talents which have been assiduously, though perhaps not successfully cultivated; and which approbation, I now, for the first time, with trembling diffidence, solicit.

I am well aware, that the subject is surrounded with difficulties, but I am inclined to believe, that truth, on this subject, is not less susceptible of discovery, than on various other physiological subjects, which, at this time, are quite familiar to physiologists; and I do not doubt, that, if nature were interrogated, with regard to this subject, with the firmness, the zeal and the patience, which have attended the inquiries of medical philosophers into other abstruse subjects of physiology, she would pronounce the oracles to the complete reward of the labourer. I have pursued the coy *maid* into some of her recesses, and have endeavoured to extort from her some of the oracles; and I flatter myself not altogether without success. My inquiries, however, have led me to conclusions adverse to those which Doctor Dewees has endeavoured to establish in his Essay upon superfœtation; and I deem it a service due to the cultivators of physiology to make known those opinions, which have been deduced, not from uncertain conjectures, but from responses, rendered by interrogated nature.

* This communication has neither date nor place of abode; which leads the Editor, again to request the authors, of papers transmitted to him, to be particular on this point; as well as in writing distinctly their names, which are sometimes obscure.

That there is a specific sensibility resident in the female genital system will not be questioned, and any attempts to prove it would therefore be deemed superfluous. The first inquiry, then, which naturally arises, and to which our attention will, in the first place be directed, is, where this sensibility, which I shall call venereal, resides? It is answered, in the os tinctæ chiefly, but also in the uterus itself, in the fallopian tubes, and perhaps, in the ovaria. I am inclined to think, that the ovaria possess a share of venereal sensibility; because, as venereal desire is first awakened in males by the stimulus of the semen, so it is probable it is first aroused in females by one or more ovula acquiring maturity: but where does the stimulus of a mature ovulum first exert itself? In the uterus, whereby the catamenia are excited and established. Does not this serve to shew a connection between the ovaria and the uterus by a common sensibility?

That the venereal sensibility resides in the os tinctæ, &c. I infer from the structure of the parts, and especially from the projection of the collum uteri into the vagina, where it will of necessity, in the sexual intercourse, receive irritation from the soft and velvet-like head of the penis, well calculated to produce what I have called the venereal orgasm; which consists in a certain excitement of the uterine system, accompanied with exquisite sensations, similar to those which take place in the male, at the time of the ejection of the semen, and, with an unknown desire to receive the seminal stimulus. But that the venereal sensibility is seated in the parts I have alleged, is established beyond all doubt, by the fact, that the os tinctæ is actually the seat of pleasure in females in the venereal congress. Whether this fact is known to physiologists in general, I have not been able to ascertain; but I am inclined to think it is not; otherwise their theorising on impregnation would have been more conformable to the natural suggestions of this fact; and particularly, they would not have supposed an ejecting power in the penis sufficient to throw the semen into the uterus: and this involves

another absurdity, viz. that the mouth and neck of the womb must open at the same time, to make way for the semen to be injected. It seems to us, if this fact, and another which we shall presently state, had been known to Doctor Dewees, he would not have adopted the hypothesis which he labours so strenuously to maintain.

The other fact which I am about to state, and which I have hinted at above, is, that sometimes (and this will happen more or less frequently, *cæteris paribus*, as the venereal sensibility is more or less accumulated) during the venereal congress, the *os tincæ*, the uterus and its appendages take on actions calculated to seize and to convey the seminal stimulus to the place of its destination.

The following combinations of causes and effects will serve to convey a clear conception of the manner, in which we suppose impregnation is effected.

Irritation applied by the glans penis to the *os tincæ*, well prepared to receive this irritation by its projection into the vagina, and by its extreme sensibility, is the immediate cause of the venereal orgasm, or that unknown desire which the female sometimes feels, in coition, for the seminal stimulus; and secondly, that an absorption of the fecundating fluid, when applied to the *os tincæ* during the orgasm, is the proximate effect thereof; and in the third place, that the transmission of the semen to the ovaria, by the proper action of the uterine system, is as naturally the consequence of absorption, as deglutition is of agreeable aliment taken into the pharynx. And lastly, that impregnation is the final cause of the sexual intercourse, and of the pleasures with which it is accompanied.

It clearly follows from what has been stated above, that impregnation will never take place unless the venereal orgasm has been excited; and it is equally plain, that it will not happen un-

less the semen is brought in contact with the os tincæ during the venereal orgasm; and it follows with equal clearness, that an apposition of the urethra to the os tincæ, at the same time will be important, if not indispensable; not indeed for the purpose of the injection of the semen into the uterus, but that the feminal stimulus be applied to the os tincæ at the moment when it is prepared to absorb and convey it to the ovaria.

That an apposition may take place, appears to me entirely probable, from the phenomena which very generally occur in a sexual intercourse, in which the venereal orgasm is awakened; among which are the following: the cervix uteri becomes tumid, the ligamenta rotunda contract, the uterus is depressed in the pelvis, and the os tincæ is brought nearer to the orificium externum, and assumes a direction favourable to an apposition; and agreeably to these views we might easily obviate the objections derived from a penis unusually short, and from a partial imperviousness of the vagina; but we will not pursue this part of the subject any farther.

We have seen, that the objection of Doctor Dewees against impregnation through the route of the uterus, taken from the consideration of the inability of the penis to inject the semen into the uterus, is without foundation; and that, derived from the fallopian tubes being filled with a viscid mucus, together with the viscidness of the semen, appears to us altogether as groundless: but a more serious objection urged by the Doctor, is, that our hypothesis supposes two actions in the fallopian tubes, diametrically opposite to each other; one by which the semen is conveyed to the ovaria, and the other by which the ovulum or ovula are conveyed from the ovaria to the uterus, which he asserts to be absurd, and unsupported by any analogy with which we are acquainted, in the human body. Am I mistaken when I think I perceive an analogy between these actions of the genital system and those which occur in the stomach and esophagus in the acts of vomiting and swallowing; in the intestinal absorbents,

in the acts of drinking up the bile and disgorging it again in diarrhoeas and during the operations of active cathartics? And may we not as well admit a retrograde motion in the fallopian tubes, as of the biliary ducts according to the opinion of Doctor Cullen; or of the absorbents of the urinary bladder and others agreeably to the notion of Doctor Darwin? And is it not a well established law of the animal economy, that different and even opposite actions are produced by different stimuli, or by different degrees of the same stimulus? What hinders then, but the fallopian tubes may be excited into a retrograde motion, by the specific stimulus of the newly vivified ovula?

But how is superfœtation to be accounted for, according to our hypothesis? I am not entirely certain it ever does happen. There is still, in our opinion, a possibility of mistake in the first case detailed by the Doctor. The smallest fœtus may possibly have been coeval in its existence with the largest, and its growth may have been retarded by some unknown cause. In the second case, the girl may have admitted the embraces of the white and black man within a short distance of time of each other: upon this supposition it is possible to conceive, that each embrace proved prolific, and indeed this exposition seems to me quite admissible. But suppose superfœtation may happen, we are then only prepared to offer some conjectures as to the manner in which it may happen; and we would ask, why it may not take place as we have endeavoured to evince other impregnations do? This, it will be objected, is impossible, the passage from the vagina into the uterus being obliterated after impregnation; but does it appear that this is the fact? Does not the smallest quantity of blood effused into the uterus during gestation easily find its way into the vagina? The fact is, the passage is only obstructed with a viscid mucus, which might, it is conceived, be diluted in time of coition, so as to admit the passage of the semen into the uterus, whence it may be conveyed to the ovaria by the fallopian tubes, as in other fœcundations; for it

will not be asserted, that the openings of these tubes in the uterus are always obstructed by the placenta.

Thus we conceive the main difficulty to superfœtation, (supposing this ever to happen) through the route of the uterus, is obviated. Upon the whole we are fully persuaded, that the theory of Doctor Dewees, however ingenious, is entirely insufficient to explain the phenomena of impregnation; nor can we perceive the necessity of resorting to it, in order to account for superfœtation, were we persuaded that this may happen: but to this, it seems to us, the all-wise Creator has opposed at least the following obstacles, viz. a diminished venereal sensibility, and a retraction of the cervix uteri from the vagina in the progress of gestation; and hence it seems highly improbable that, during this period, the venereal orgasm will ever take place; and agreeably to the opinions we have endeavoured to establish, superfœtation will in all probability never happen.

—————Si quid novisti rectius istis,
Candidus, imperti: si non, his utere mecum.

PEACHEY HARRISON.

DR. JOHN REDMAN COXE.

Observations on the indigenous Medicinal Plants of America; and on the Cultivation of those of foreign Growth. By Dr. TOBIAS WATKINS.

Havre-de-Grace, December 16th, 1805.

DEAR SIR,

ABOUT two years ago I commenced a series of experiments upon the nature of some of our indigenous plants, and the easiest means of adapting the cultivation of those of foreign growth to the climate of the United States; and I was much pleased to find, in the last number of your Museum, a communi-

eation on the same subject from my esteemed friend Dr. Mease. As my principal object is to excite others to similar experiments, if you think the subject worth notice, you will oblige me by giving a place in your Museum to the following observations on the nature and cultivation of medicinal plants in the United States.

From the very birth of our country to the present day, we have been indebted to different European nations for the result of their labours and studies, in those arts and sciences which have contributed so largely to our happiness and well-being. Some few Americans however have boldly stepped forward to assert our natural independence, who by their unwearied assiduity and indefatigable labours in the field of science, have raised an harvest sufficiently abundant to exercise the industry of an enterprising posterity; and in no science have we been blessed with more originality than in that of medicine, and its different branches. Natural history has, until lately, formed but a small part of the study of Americans; and the researches of those few who did engage in it, were made, it would appear, rather with a view to advance their own fame than to benefit others; hence there has been but a trifling addition made to the *Materia Medica*, from the United States. Botanical gardens have been instituted, which will no doubt tend to facilitate the study of that pleasing and instructive science; but hitherto, I believe, that few experiments have been made to ascertain the relative qualities of their produce with those from foreign countries, and we continue our dependance on these for a supply. It is well known that many medicines, from long keeping, lose virtues which in a recent state they possessed in an eminent degree, and the great demand for particular medicines, (more especially the Peruvian bark) which have been supposed to thrive only in particular countries, is certainly frequently the cause of adulterations which have ultimately disappointed our high-raised expectations of their success. It is my intention, as far as my experiments have carried me, to point out the

easiest means by which some of our indigenous medicinal plants may be cultivated, and at the same time compare their virtues with those of the same class imported. If what I have done, or can say on the subject, should incite a single attempt towards a prosecution of the proposed plan of raising our own medicines, I shall certainly feel far overpaid, in the conviction that a fair and candid trial, with industry and perseverance, will fully demonstrate its general utility as well as economy.

It will be seen also in the sequel of these observations, that some of our most valuable exotics may be cultivated here at a less expence than they can be imported.

1st. White poppy.* *Papaver somniferum* of Linnæus. As this plant has found a place in almost every garden for the beauty of its flower, it will be needless to give any description or make any remarks on its cultivation; I shall therefore only relate the method which I took to procure the juice, and some experiments on its strength and virtue. A day or two after the flowers had fully blown, with a sharp knife I made from three to five incisions longitudinally on the capsules or heads of the plant, at sun-rise, taking care not to carry the incision so deep as to wound the seed. The juice would continue to exude from these incisions until sun-set, when it was carefully collected on a clean glass and exposed to the next day's sun, by which time it would become sufficiently inspissated to form pills. In taste and smell it exactly resembles the common Turkey opium, but the colour is considerably darker.

In a violent fit of the colic in which I suffered the most excruciating pain, I took one grain of the juice (my usual dose of opium) which produced no effect; in twenty minutes I repeated the same dose, and in less than fifteen minutes afterwards the pain was entirely destroyed, and I felt somewhat

* There appears to me to be no difference in the juice of several other species of the poppy.

drowsy and stupid; my pulse, during this time, suffered no variation; but I continued to experience the effect of the opium for three hours; having no return of pain during all that time. As this proved to me that the poppy juice might be given, at least without any bad consequences, I felt no hesitation in trying it the next opportunity, which occurred a few days after, in a case of obstinate and troublesome diarrhoea in an adult. After the operation of a dose of ol. ricin. I directed the patient to take one grain of the poppy juice every two hours, until the frequency of his motions should be abated: after the third dose, my patient fell into a profound sleep, which lasted uninterrupted, for five or six hours; when he awoke and continued perfectly free from his complaint. In a third case of violent tooth-ache, one grain placed in the decayed tooth, procured relief in ten minutes. For six months past I have occasionally used it in those cases where opium was necessary, with precisely the same effects; the only difference I have experienced is, that the Turkey opium is about one-sixth stronger. Common rum extracts the whole virtue of the juice, leaving scarcely any residuum.

2d. Palma Christi. (*Ricinus communis*,) Lin. This plant, which is a native of the West Indies, requires particular attention to bring it to perfection in this climate: unless planted at the first opening of spring, the nuts cannot have time to ripen before frost. The method which I have found to succeed best, is to plant the seed in November, in pots or boxes, and by keeping them in a house during the winter, they begin to germinate about the middle of March; and by the first of May, when the earth has become thoroughly thawed, the young plants may be removed into the garden, and transplanted into rich mould or ground highly manured; care should be taken to water them well for some days, after which nothing more is necessary than to keep the ground about them well worked, and free from weeds; with this attention, the plants will grow to the height of from five to eight feet with very luxuriant branches. The

flowers make their appearance generally about the first of July, and continue in successive crops until entirely destroyed by the frost. The nuts, which are contained in a beautiful green bur, may be gathered as soon as the external covering begins to open a little and lose its green colour; and care being taken to collect them as fast as they ripen, from two to three pints may be gathered from one plant before the middle of October. The method which I took to obtain the oil was as follows. Into a clean iron pot capable of containing two gallons, I put one gallon and a half of clean spring water, into which five pints of the seed (freed from the thin brittle shell which envelops them) were thrown. The pot was then covered and placed on a slow fire; as soon as it began to boil, it was removed and the oil carefully skimmed off, yielding fourteen ounces. The pot was then replaced on the fire and suffered to boil as long as any oil arose. The product of this last boiling was one pint; thicker, and more of an orange colour than the first, and of a disagreeable empyreumatic odour and taste. The first fourteen ounces were of a light yellow colour, about the consistence of pure olive oil, without taste or smell. Of this, one ounce would generally operate very briskly without causing the least nausea or griping, and as I have always found it more certain in its operation and much less nauseous than the expressed oil which comes to us from the West Indies, I have universally given it the preference when oil was indicated.

3d. Mallow. *Malva Sylvestris*. L. This plant, when cultivated, grows to the height of six feet; the leaves very broad and beautifully fringed and scalloped, with a small delicate purple flower, which appears in June and July. The leaves are the only part which I have used, and these have long stood high in the estimation of the old women, in all cases of urinary obstructions. They appear to have a peculiar action on the kidneys; and in several cases of obstructed urine, I have seen an infusion of them, given in doses of a tea-cupful, at short intervals, produce the most speedy and happy effects; in gonorrhœa,

this medicine is of wonderful service in allaying the acrimony of the urine. I have directed it likewise with considerable benefit in some cases of diarrhœa where the stools were acrimonious; three ounces of the pure leaves infused in a pint of boiling water will purge gently without griping. For keeping, the leaves should be gathered as soon as the flowers disappear, and dried in a house; when exposed to the sun they lose that mucilaginous quality for which they are serviceable.

4th. Pennyroyal, *Mentha*, *Pulegium*. L. This plant generally grows wild in great abundance in old uncultivated fields, where it may easily be discovered by its strong, penetrating, somewhat aromatic smell. There is no essential difference in the qualities of the plant, when cultivated, except that it acquires a more penetrating smell. The pulegium, has long been deservedly celebrated as an emmenagogue, and indeed in no instance have I ever seen it fail to produce a flow of the menses, and after every other means had been tried in vain. Physicians are too apt to despise such simple remedies as are in the hands of every body, and thus are often baffled in their endeavours to relieve some diseases which the most ignorant old woman can effectually remove; from this error alone, I am convinced that some of our most powerful remedies have no place in the shops. The usual manner of using the pulegium, is infusion of the whole plant; but I have given the powder of the dried plant to the extent of half a drachm for a dose with the same effect: rectified spirit makes an agreeable tincture possessing the whole virtues of the plant.*

* So powerful and immediate is the action of this plant on the uterus, that several cases of abortion are on record, produced by its odour—One instance, I have myself known, during the last summer, in a woman of delicate constitution, in the fourth month of her pregnancy.

Time will not permit me to give you a longer list at present ; but it is my intention, if you should think that any benefit will result to the science from the pursuit of this subject, to continue my communications as often as I have leisure. With sincere wishes for the success of your labours,

I am, dear sir,

Very respectfully,

Your obedient servant,

T. WATKINS.

DR. JOHN REDMAN COXE.

MEDICAL AND PHILOSOPHICAL REGISTER.

FOREIGN AND DOMESTIC.

PRIZE MEDALS,

Offered by the HUMANE SOCIETY of Philadelphia.

THE Society have observed, with gratitude, and admiration, the labours of the many learned and ingenious benefactors of mankind, who have advanced to an high degree of improvement, the means to be employed in restoring to life those who have been apparently deprived thereof. But they have at the same time to regret, that notwithstanding much good hath been done, yet these means very often fail of success. In order to excite public attention towards the further improvement of so important a part of medical science, the society is induced to offer ;

For the best dissertation on the means of restoring to life, persons apparently dead from drowning, and more effectual than any yet in use, a GOLD MEDAL, value FIFTY DOLLARS.

For the second best, a SILVER MEDAL, value TWENTY-FIVE DOLLARS.

The dissertations to be sent to the Secretary of the Society (post-paid) by the first day of January 1808.

They may be written in the English, French or Latin language, to be accompanied with a sealed paper, containing the author's name and place of residence; which is not to be opened, unless the prize is decreed.

They shall be submitted to the judgment and decision of the Medical Professors of the University of Pennsylvania.

THE SOCIETY entertain the pleasing hope, that to some of their fellow citizens is reserved the heart-felt satisfaction and honourable reward of improving this truly interesting part of useful knowledge; and of announcing to the world an important addition to the means already in use for restoring suspended animation.

By order of the Managers of the Humane Society,

JOSEPH CRUKSHANK, *President.*

ISAAC SNOWDEN, *Jun. Secretary.*

Philadelphia, Dec. 11th, 1805.

At the Anniversary Meeting of the *Medical Society of South-Carolina*, held on Tuesday last, the 24th inst. (January) the following gentlemen were elected officers for the ensuing year :

Doctor PHILIP G. PRIOLEAU, *President.*

Doctor JOSEPH JOHNSON, *Vice-President.*

Doctor JOHN P. GOUGH, *Treasurer.*

Doctor FREDERICK DALCHO, *Secretary.*

The Anniversary Oration was delivered by Dr. DALCHO. Dr. HALL was appointed to deliver the Oration at the ensuing Anniversary.

Abstract of Meteorological Observations for 1805.

Months in divisions.	THERMOMETER.				BAROMETER.				Prevailing winds.	Weather.
	Highell.	Lowell.	Mean of division.	Mean of month.	High-ell. In. dec.	Lowell. In. dec.	Mean of div. In. dec.	Mean of mo. In. dec.		
1	33	10	23.0	26.0	30.22	29.65	29.90	30.18	NW	Clear 4.4
2	35	15	27.2		30.48	29.90	30.19		SW	Cloudy 2.3
3	33	14	20.9		30.94	30.10	30.46		NE	—
4	41	10	27.2		30.12	29.14	29.94		W	Rain, &c.
5	47	6	24.4		30.35	29.75	30.12			26
6	41	26	33.3		30.30	29.85	30.02			
1	41	15	25.1	36.8	30.30	29.70	29.98	30.37	NW	Clear 5.1
2	41	20	34.2		30.45	29.80	30.11		SW	Cloudy 2.1
3	49	24	39.9		30.40	29.50	30.92		NE	—
4	41	22	30.6		30.35	29.90	30.16		W	Rain &c.
5	51	35	42.5		30.41	30.05	30.21			12
6	52	34	40.2		30.48	30.14	30.31			
1	55	34	44.6	49.0	30.45	30.10	30.30	30.33	NE	Clear 4.1
2	68	42	53.6		30.36	30.10	30.26		SW	Cloudy 2.9
3	55	27	40.4		30.65	29.92	30.25		NW	—
4	73	40	54.2		30.48	30.01	30.27		SE	Rain, &c.
5	63	35	45.7		30.55	29.90	30.30			23
6	64	40	47.6		30.51	30.08	30.33			
1	68	48	57.4	58.3	30.45	30.12	30.28	29.83	NW	Clear 5.9
2	64	46	51.9		29.95	29.70	29.80		SW	Cloudy 2.4
3	74	45	60.3		30.05	29.75	29.94		W	—
4	77	54	63.4		30.10	29.70	29.26			Rain, &c.
5	67	51	58.0		30.21	29.60	29.26			7
6	71	52	57.6		30.20	29.85	29.97			
1	81	54	65.8	65.5	30.29	29.88	30.05	30.21	SW	Clear 6.0
2	71	54	61.6		30.44	29.90	30.17		NW	Cloudy 2.1
3	74	55	65.7		30.28	29.68	29.98		SE	—
4	73	53	61.2		30.08	29.85	29.99		NE	Rain, &c.
5	77	58	66.5		30.20	29.96	30.09			12
6	79	57	68.4		30.18	29.90	30.63			
1	84	58	71.8	73.5	30.19	29.83	29.97	30.07	SE	Clear 6.7
2	80	61	66.2		30.16	29.65	29.90		SW	Cloudy 1.9
3	85	60	72.8		30.34	30.05	30.28		NW	—
4	86	74	77.6		30.26	30.10	30.23			Rain, &c.
5	88	71	77.0		30.20	29.98	30.12			4
6	84	66	75.7		30.10	29.85	29.96			

Wind SW 339
 NW 337
 NE 142
 SE 122
 W 72
 Various 48

Abstract of Meteorological Observations for 1805.

Months in divisions.	THERMOMETER.				BAROMETER.				Prevailing winds.	Weather.	
	Highest.	Lowest.	Mean of division.	Mean of month.	High- est.	Least.	Mean of div.	Mean of mo.			
					In. dec.	In. dec.	In. dec.	In. dec.			
July.	1	91	69	78.4	81.3	30.45	30.16	30.31	30.23	NW	Clear 7.5
	2	93	78	85.6		30.34	30.16	30.25		SW	Cloudy 1.4
	3	91	75	81.4		30.38	30.12	30.25		SE	—
	4	90	75	81.5		30.30	30.00	30.16		SE	Rain, &c.
	5	88	69	84.0		30.44	30.08	30.27		NE	4
	6	87	65	76.8		30.22	30.00	30.13			
August.	1	86	72	78.2	78.8	30.28	29.95	30.06	30.21	SW	Clear 5.8
	2	86	72	78.2		30.41	30.32	30.35		SE	Cloudy 2.9
	3	91	74	77.2		30.31	30.08	30.19		NW	—
	4	88	72	80.2		30.33	30.05	30.25			Rain, &c.
	5	92	75	82.5		30.30	30.10	30.19			6
	6	88	68	76.5		30.42	30.12	30.26			
September.	1	88	63	72.6	70.6	30.50	30.15	30.31	30.29	SW	Clear 5.3
	2	88	71	77.3		30.49	30.30	30.38		NE	Cloudy 1.5
	3	86	69	75.3		30.30	30.12	30.19		NW	—
	4	86	73	78.0		30.37	30.25	30.31		SE	Rain, &c.
	5	82	60	68.1		30.40	30.08	30.21			13
	6	62	48	52.4		30.42	30.30	30.34			
October.	1	63	47	56.0	54.1	30.32	29.89	30.14	30.18	NW	Clear 6.1
	2	65	44	54.2		30.41	30.10	30.27		SW	Cloudy 2.0
	3	76	48	62.7		30.30	29.94	30.14		NE	—
	4	72	44	57.6		30.40	30.00	30.17			Rain, &c.
	5	56	37	49.1		30.15	29.75	29.92			12
	6	58	32	45.4		30.67	30.30	30.48			
November.	1	64	45	52.0	46.9	30.35	30.01	30.27	30.15	NW	Clear 5.7
	2	55	40	48.6		30.59	30.15	30.37		SW	Cloudy 2.0
	3	65	34	48.0		30.55	30.10	30.33			—
	4	48	39	42.5		30.20	29.90	30.08			Rain, &c.
	5	48	36	41.1		30.33	29.98	30.11			13
	6	65	34	49.5		30.12	29.62	29.85			
December.	1	57	32	47.0	45.8	30.52	30.12	30.36	30.19	NW	Clear 7.5
	2	58	36	47.3		30.39	29.97	30.19		SW	Cloudy 1.0
	3	58	33	48.0		30.51	29.98	30.20		W	—
	4	59	32	45.4		30.39	29.98	30.24			Rain, &c.
	5	55	34	47.0		30.45	29.55	30.10			8
	6	54	27	40.2		30.87	29.70	30.08			

Range of thermometer during the year,
Mean height of thermometer for the year,
Greatest variation of thermometer in 24 hours,
Range of barometer during the year,
Mean height of barometer for the year,
Greatest variation of barometer in 24 hours,
Rain, &c. during the year
Greatest quantity in one month (January,)
Least quantity in one month (July,)

Degrees 87.
57.3
28.
Inches 1.73
30.18
0.92
42.
9.
7.8

THERMOMETERS.

Fahrenheit's thermometer is generally used in this country. In it the range between the freezing and boiling points of water is divided into 180 degrees; and as the greatest possible degree of cold was supposed to be that produced by mixing snow and muriate of soda, it was made the zero, and the freezing point became 32°, and the boiling point 212°.*

The Centigrade thermometer of France, places the zero at the freezing point, and divides the range between it and the boiling point into 100°. This has long been used in Sweden under the title of Celsius's thermometer.

Reaumur's thermometer, which was formerly used in France, divides the space between the freezing and boiling of water into 80° and places the zero at the freezing point.

Wedgewood's pyrometer is only intended to measure very high temperatures. Its zero corresponds with 1077° of Fahrenheit's, and each degree of Wedgewood is equal to 130 of Fahrenheit.

De Lisle's thermometer is used in Russia. The graduation begins at the boiling point and increases towards the freezing point. The boiling point is marked 0, and the freezing point 150.

Therefore $180^{\circ} F. = 100^{\circ} C. = 80^{\circ} R. = 150 D. = \frac{18}{13} W.$

Or to reduce centigrade degrees to those of Fahrenheit, multiply by 9 and divide by 5, and to the quotient add 32, that is, $\frac{9C}{5} + 32 = F.$

To reduce Reaumur's to Fahrenheit's, we have the following formula, $\frac{9R}{4} + 32 = F.$

To reduce De Lisle's degrees under the boiling point, we have $F = 212 - \frac{6D}{5}$ to reduce those above the boiling point $F = 212 + \frac{6D}{5}$

To reduce Wedgewood's degrees to those of Fahrenheit, we have $130 W + 1077 = F$, or inversely,

$$\frac{5F - 1060}{9} = C.$$

$$\frac{4F - 128}{9} = R.$$

$$\frac{F - 1077}{130} = W.$$

$$\frac{1060 - 5F}{9} = D.$$

$$\frac{5F - 1060}{6} = D.$$

* The freezing point would appear to be the most natural commencement of the scale or Zero. and here we find both Reaumur's and the Centigrade Thermometer coincide. The present range of 180° between the freezing and boiling point, is a very convenient one for the regular division of the scale. and it will also facilitate the reduction of the various scales to each other. I have several times adapted this scale to thermometer tubes, and cannot but wish it was in general use. I shall take the liberty to call it the American Thermometer.

Editor.

TABLE of the Degrees of different Thermometers, omitting Fraction at which some remarkable Chemical Phenomena occur.

REA.	CENT.	FAHR.	AMER.	
54	68	90	122	Cold produced by Mr. Walker.
44	55	66	98	Nitric acid freezes, Fourcroy.
36	44	50	82	Cold observed at Hudson's Bay, 1 McNab.
35	43	46	78	Ether freezes.
34	42	45	77	Ammonia exists in a liquid form.
32	39	39	71	Mercury freezes.
30	37	36	68	Sulphuric acid freezes, (Thomson).
28	35	31	63	Sulphurous acid liquid, (Monge).
24	30	23	55	Cold observed at Glasgow on the fi face of snow, 1780.
23	30	22	54	Acetous acid freezes.
20	25	14	46	Cold observed at Glasgow, 1780.
19	24	11	43	Two parts of alcohol and one of wa freeze.
17	14	7	39	Brandy freezes.
14	18	0	32	Cold, produced by mixing equal pa of snow and muriate of soda.
7	9	16	16	Oil of turpentine freezes. Marguer did not freeze at--18 Morelli.
5	6	20	12	Strong wines freeze.
4	5	23	9	Fluoric acid freezes, (Priestly). of bergamot and cinnamon freez (Marg.)
3	4	25	7	Human blood freezes.
2	2.5	28	4	Vinegar freezes.
1	1.25	30	2	Milk freezes.
0	0	32	0	Oxymuriatic acid melts, (Thomson). Water freezes.
2	2.5	36	4	Olive oil freezes.
4	5	40	8	Oxymuriatic acid boils, (Thomson). Equal parts of phosphorus and p phur melt, (Pelletier).
5	6	43	11	Phosphorus burns slowly.
6		45	13	Sulphuric acid, Sp. gr. 1.78, freez (Keir).
10	12	55	23	to 66 putrid fermentation, (Fourcro
12	15	59	27	Vinous fermentation begins, (Fourc

RE.	CENT.	FAH.	AME.	
14	17	64	32	Oil of anise freezes,
15	18	66	34	to 133, F. Animal putrefaction, 70 to
				panary fermentation.
16	20	68	36	Camphor evaporates, (Fourcroy).
19	24	75	43	Summer heat at Edinburgh.
20	25	77	45	Vinous fermentation rapid, (Fourcroy).
				Acetous ditto begins.
21	26	80	48	Phosphorus burns in oxygen gas. 104
				Goettling.
22	28	82	50	The adipocere of muscle melts.
23	31	88	56	Acetous fermentation ceases, (Fourc.)
				Phosphorus is ductile. F.
28	37	96	64	to 100, animal heat.
		97	65	Axunge melts, (Nicholson).
29	36	98	66	Ether boils.
30	37	99	67	Phosphorus melts, (Pelletier).
32	40	104	72	Resin of bile melts.
33	41	107	75	Feverish heat.
34	42	109	77	Myrtle wax melts (Cadet).
36	45	112	80	Spermaceti melts (Bostock).
40	50	122	90	Phosphorus burns vividly, (Fourcroy).
				148, (Thomson).
42	53	127	95	Tallow melts, (Nicholson).
44	54	130	98	Ammonia is separated from water.
48	60	140	108	Ammonia boils, (Dalton).
49	61	142	110	Bees wax melts, (Irvine).
50	63	145	113	Camphor sublimes, (Venturi). Amber-
				gris melts, (La Grange).
55	79	155	123	Bleached wax melts, (Nicholson).
59	74	165	133	Albumen coagulates. 156 (Black).
61	77	170	138	Sulphur evaporates, (Kirwan).
64	80	176	144	Alcohol boils. 174 (Black).
80	100	212	180	Water and volatile oils boil.
				Bismuth 5 parts, tin 3, and lead 2, melt.
83	104	219	187	Phosphorus begins to distil, (Pelletier).
88	110	230	198	Muriate of lime boils, (Dalton).
89	111	232	200	Sulphur melts, Hope. (212°. Four-
				croy). (185°. Kirwan.)
90	112	234	202	Adipocere of biliary calculi melts.
				(Fourcroy).
93	116	241	209	Nitrous acid boils.
96	120	248	&c.	Nitric acid boils.

REAU.	CENT.	FAHR.	WED.	
112	140	283		White oxide of arsenic sublimes. Alloy of equal parts of tin and bismuth melts,
120	150	303		Sulphur burns flowly, and camphor melts, (Venturi),
134	168	334		Alloys, tin 3, and lead 2, and tin 2, bismuth 1, melt,
182	227	442		Tin melts, Crichton. (413, Irvine),
190	238	460		Tin 1, and lead 4, melt,
197	248	476		Bismuth melts, (Irvine),
226	282	540		Arsenic sublimes,
232	290	554		Phosphorus boils, (Pelletier),
235	294	560		Oil of turpentine boils,
248	310	590		Sulphuric acid boils, (Dalton), 546, Black. 540, Bergm.
252	315	600		Linfced oil boils. Sulphur sublimes, (Davy.) 570, Thomson,
258	325	612		Lead melts, Chrichton. (594 Irvine). 585, Secundat. (540 Newton),
269	335	635		Lowest ignition of iron in the dark,
279	350	660		Mercury boils, (Dalton). 644 Secundat. 600, Black,
297	371	700		Zinc melts,
315	384	750		Iron bright red in the dark,
341	427	800		Hydrogen gas burns. 1000 Thomson,
342	428	802		Charcoal burns, (Thomson),
345	432	809		Antimony melts,
380	475	884		Iron red in the twilight,
418	560	1050		Iron red hot in a common fire.
462	577	1077	1	Red heat in day light.
564	705	1300	1.7 +	Azotic gas burns.
737	986	1807	6	Enamel colours burnt.
1451	1814	2897	14	Diamond burns, 1, Sir G M'Kenzie. 5000, Morveau,
1678	2100	3807	21	Brass melts,
2024	2530	4587	27	Copper melts,
2082	2602	4717	28	Silver melts.
2130	2700	4847	29	Settling heat of plate glass.
2313	2780	5237	32	Gold melts.

REAU.	CENT.	FAHR.	WED.	
2880	3580	6507	40	Delft ware fired.
3750	4680	8480	57	Working heat of plate glass.
4450	5610	10177	70	Flint glass furnace.
5370	6770	12257	86	Cream coloured stone ware fired.
5800	7330	13297	94	Worcester china vitrified.
6270	7850	14337	102	Stoneware fired.
6520	8150	14727	105	Chelsea china vitrified.
6925	8650	15637	112	Derby.
7025	8770	15897	114	Flint glass furnace greatest heat.
7100	8880	16007	121	Bow china vitrified.
			123	Equal parts of chalk and clay melt.
7460	9320	16807	124	Plate glass furnace strongest heat.
7650	9600	17327	125	Smith's forge.
7975	9850	17977	130	Cobalt melts. Cast iron melts.
8250	10320	18627	135	Bristol china, no vitrification at,
9131	11414	20577	150	Nickel melts. Hessian crucible melted.
9325	11680	21097	154	Soft iron nails melted with the crucible.
9602	12001	21637	158	Iron melts.
9708	12136	21877	160	Manganese melts. Air furnace.
10286	12857	23177	170+	Platinum, tungsten, molybdenum, uranium and titanium, melt.
11100	13900	25127	185	Greatest heat observed.

N. B. As many of these higher numbers were calculated from Wedgewood's, by the sliding rule, the two or three first figures only can be depended upon as correct. They will be found however sufficiently accurate for most purposes.

TABLE OF FREEZING MIXTURES.

DURING the solution of many saline bodies, a very considerable reduction of temperature takes place. We shall extract from Mr. Walker's paper a few of the most convenient mixtures employed for this purpose.

A mixture of]

[reduces the temperature.

Muriate of ammonia,	5 parts.	} from 50° to 10°.
Nitrate of potash,	5	
Water,	16	
Sulphate of soda,	8	} from 50° to 0°.
Muriatic acid,	5	
Snow	1	} from 32° to 0°.
Muriate of soda,	1	
Snow,	2	} from 0° to—5°
Muriate of soda,	1	
Snow,	1	} from—5° to—18°.
Muriate of soda,	5	
Muriate of ammonia, and	} 5	
Nitrate of potash,		
Snow,	12	} from—18° to—25°.
Muriate of soda,	5	
Nitrate of ammonia,	5	
Snow,	1	} from 20° to—60°.
Diluted Sulphuric acid,	1	
Snow,	2	} from 32° to—50°.
Muriate of lime,	3	
Snow,	1	} from—40° to—73°.
Muriate of lime,	3	
Snow,	8	} from—68° to—91°.
Diluted sulphuric acid,	10	

The salts ought to be recently crystallized, and reduced to a very fine powder, and the mixture should be made as quickly as possible. To produce a very great degree of cold, the materials must be previously cooled down by means of other mixtures.

The preceding tables form a part of the late improved edition of the Edinburgh Dispensatory, edited by Dr. Duncan, jun; to which is added, a scale for a thermometer, which is perhaps, the most conveniently divided of any other; and which the Editor of the Philadelphia Medical Museum presumes to designate by the title of the American Thermometer. These tables as here introduced, form a portion of a new Dispensatory, now publishing here, and which will appear in a few weeks. This, though founded on the basis of the Edinburgh Dispensatory, yet as it is entirely on a new plan, the American Editor has ventured to call the American Dispensatory. A work which has never yet made its appearance here: but the necessity of which has doubtless been experienced by every practitioner.

It has unfortunately happened that all the Dispensatories in common use in America, have the formulæ of both the London and Edinburgh Colleges, which differ in many places from each other, and in some instances so greatly as to be a source of considerable disadvantage. Thus, for example, in the formation of antimonial wine, the formula of the London, is double the strength of that of the Edinburgh College. This inconvenience is greatly augmented, by the addition of the Dublin Pharmacopœia, to the late edition of the Edinburgh Dispensatory, by Dr. Duncan. In Great Britain, this inconvenience is not perceived, because England, Scotland and Ireland, are governed in their prescriptions by the standards of their respective colleges; but in this country, where it is optional with every apothecary to compound his medicines by either Pharmacopœia, the want of a standard is peculiarly evident. It is of little consequence which set of formulæ is assumed as a standard, provided it be in general acceptance; and although such a publication as is

here proposed to be given to the public, would doubtless appear better under the sanction of the College of Physicians, yet as such an event does not appear to be probable; the Editor trusts he will not have performed an useless task in thus advancing as a standard, those formulæ taken from the respective British Pharmacopœias, which appeared to him best. Under this impression, he hopes for the aid of his fellow practitioners, in the introduction of the American Dispensatory; which he is however far from considering as perfect; yet, from the preceding considerations, he is impressed with the belief, that it may be beneficial.

Although the basis of the work is the last edition of the Edinburgh Dispensatory; the arrangement is so different from that or any other Dispensatory the Editor has met with, that he apprehends it may very properly have the distinctive appellation of the American Dispensatory. Should the present form, &c. be approved by the judgment of the medical world, it will afford the highest gratification to the Editor for the trouble it has given him; and he will cheerfully endeavour from the hints which may be afforded to him, to render any subsequent edition more perfect than the present.

Memoirs of EDWARD JENNER, M. D. From Dr. LETTSOM'S Oration, delivered before the Medical Society of London, on the 8th of March, 1804.

TO give accurate delineations of living characters is peculiarly difficult. Few can bear the stern truth of faithful biography; and where friendship directs the pen, a partiality, of which the writer is, perhaps, unconscious, slides into unmerited panegyric. There are, however, individuals whose lustre acquires no accession from the glow of public gratitude or the ardour of private veneration.—Such is our Jenner, “whom it can never be a degradation to praise, whom it is a degradation to praise without enthusiasm,” the youngest son of the Rev. Stephen Jenner, M. A. of the University of Oxford, Rector of Rockhampton, and Vicar of Berkley, in Gloucestershire; at which place Dr. Jenner was born on the 17th day of May 1749.

Besides these church preferments, the respectable parent possessed considerable landed property in the same county.

His mother was the daughter of the Rev. Henry Head, of an ancient family in Berkshire; who likewise once held the living of Berkeley, and was at the same time a Prebendary of Bristol.

Young Jenner lost his father at a very early period of his life; a loss in some measure supplied by the affectionate attentions of his elder brother, the Rev. John Jenner, B. D. Fellow of Magdalen College, Oxford, united with those of another brother, the Rev. Henry Jenner, Domestic Chaplain to the Earl of Aylesbury, and Vicar of Great Bedwin, Wilts, father

of the Rev. George Jenner, and of Henry Jenner, Surgeon, at Berkeley.

Our Jenner received his classical education at Cirencester, and his medical under Daniel Ludlow, of Sudbury, a gentleman of professional eminence.

In 1770, he took up his residence with the late John Hunter, Esq. of London, with whom he continued for about the space of two years. This celebrated Anatomist pursued also the study of natural history, which he explained by dissection, and published the result in various essays, in many of which the name of Jenner is respectfully introduced; and so highly had he estimated the acquirements of his pupil, as to propose to him a liberal engagement to join him in delivering lectures upon natural history, which Hunter then had in contemplation.

At this period, the voyage of Captain Cook with Sir Joseph Banks was projected. A gentleman skilled in the knowledge of comparative anatomy was wanted for the purpose of examining and describing the new animals they might chance to find: Jenner was fixed upon as the best calculated for such an office, and lucrative conditions were proposed; but his affection for his brother already mentioned, induced him to decline an offer so seductive to a lover of natural history.

This fraternal attachment, which continued to the death of the latter, annihilated every prospect of emolument from distant sources, and determined him to settle in Berkeley, the place of his nativity, to cultivate the practice of surgery and the pursuits of natural history in the country; soon after which the degree of Doctor of Physic was offered him by the University of Erlingen; an honour he declined, as incompatible with the professional discharge of surgery.

An incident afterwards occurred which appeared much more likely to detach him from the immediate society of his beloved relative. He happened to dine with a large party at Bath: Something was introduced at the table which required to be warmed by the application of the candle; and doubts were expressed by several persons present, whether the more speedy way would be, to keep the flame at a little distance under, or to immerse the substance into it. Jenner desired the candle to be placed near him, and immediately* put his finger into the flame, suffering it to remain some time; he then put his finger above it, but was obliged to snatch it away immediately.—“*This, Gentlemen,*” said he, “*is a sufficient test.*”—The next day he received a note from General Smith, who had been of the party the preceding day, and who was before that time an utter stranger, offering him an appointment in India, which would insure him, in the course of two or three years, an annual income of 3000*l.* The offer was referred to his brother; and our Jenner, from his attachment to him, declined it.

Some may, perhaps, be ready to conclude that fraternal affection was carried to a degree of weakness—But who can avoid admiring the heart that is susceptible of such tender affections? Some may plausibly suggest, that in consequence of the latent designs of Heaven, he was happily prevented from engaging in distant pursuits, to announce to the world some grand discovery, and to establish a new æra of medical science, events which have since taken place.

In tracing a character thus rendered illustrious, the mind dwells upon it with increased pleasure, in contemplating the combination of moral sentiment and practical virtue—where the generous passions are subservient to sound reason, which directs them to promote public good and private happiness, as Fenelon well observes, “*La vertu, en réglant les passions, n’éteint point le sentiment.*”

My respectable auditory will permit me to illustrate this sentiment, by exhibiting the beneficence of our amiable associate.

An ingenious but unfortunate member of this Society, after many ineffectual struggles to surmount pecuniary difficulties, fell a victim to disease, leaving a widow and children penniless. From early friendships, I was desirous of raising by subscription, a small sum to enable them to put on a covering more desirable than sackcloth and ashes. I addressed a letter to Dr. Jenner on the subject, and specified the amount of the donation I wished him to bestow. Suffice it to say, that he thanked me for affording an opportunity of assisting objects of distress, and sent me a sum exceeding my request.

A few days afterwards he intimated to me, that he feared that a respectable person, whose name on this subject shall never pass my lips, laboured under pecuniary embarrassment; I expressed my willingness to offer my mite in conjunction with his. We soon, however, turned the conversation to some other subject. Jenner has a heart not made of stone or clay; and I venture to say, that the object of our conversation was the companion of his couch, for early in the morning I received a letter, which is too laconic to fatigue you in hearing:—

“ I write this note just to propose an amendment with respect to the sum for the use of our friend. Will you let it be fifty instead of thirty guineas ?

E. JENNER.”

I may here observe, that not any part of these memoirs is immediately derived from our distinguished associate. From his friends I have drawn my principal information. The last to whom I applied, though known to me merely by correspondence, favoured me with some traits of his beneficence in the following words : “ As for his generosity, it is constant and un-

bounded. It is not like an intermitting spring, which flows by starts, and as it were by caprice ; but it resembles a perennial fountain, which ever gladdens the verdant plains, and never disappoints them of their expected refreshment. Yet, although his generosity never intermits, its stream is sometimes poured forth with an unusual flood ; an instance of which is, his offer of £. 1000, to equip a vessel for the purpose of introducing the vaccine inoculation into the East Indies, when the parsimony of Government neglected to do it."

During his residence in the country, our associate lightened the severer duties of his profession by the study of physiology and natural history.

In 1788, his "*Observations on the Natural History of the Cuckoo*," appeared in the Philosophical Transactions, which were admired and approved by the best informed naturalists in this department of science. He has since attempted to demonstrate, through the medium of comparative anatomy, that what exist in human lungs, in the form of tubercles, are really hydatids.

To one attached to natural history, the pursuit of ornithology, with which the emigration of birds is immediately connected, must afford singular pleasure. The outlines of a paper on this subject have often been spoken of by Jenner to the Members of the Royal Society, and which contain many interesting and novel observations, but which his numerous engagements have hitherto prevented him from communicating to the public.

Thus early distinguished as a Naturalist, he was elected a Fellow of the Royal Society of London ; and in 1792, he took his diploma of Doctor of Physic.

We have ample reason to conclude, that many important essays proceeded from his pen. By a late publication of Dr. Parry's, of Bath, it appears that the discovery of the supposed cause of angina pectoris originated with him, whilst his modesty repels him from the just claims of originality.

Of these, however, a transient view only is taken ; the mind absorbed by mighty objects passes over inferior ones, as the stars are extinguished by the brilliancy of the sun. With a new æra of existence, afforded by the discovery of vaccine inoculation, the exuberance of gratification, the charms of health, the perfection of beauty, crowd upon imagination, agitate every tender sympathy of the heart, and delight all the intellectual powers of the soul !

The mind reposeing after ecstasies derived from the contemplation of a discovery the most prominent in utility, looks with a lively curiosity to scrutinize into its origin, which I shall now attempt to explain.

About the year 1775, inoculation of the small-pox was much practised in Gloucestershire, after the Suttonian plan. Jenner, who then practised surgery, observed, that among those whom he was frequently called upon to inoculate, many resisted every effort to give them the small-pox, in consequence of their having undergone the cow-pock, contracted by milking cows affected with a peculiar eruption on the teats. He found, however, that some of those who had undergone the cow-pock, on being afterwards inoculated with the small-pox, took this virulent disease.

This discovery damped in some degree his ardour ; but the genius of Jenner triumphed over every obstacle. By accurate investigation, he ascertained that the cow was subject to some varieties of spontaneous eruption on her teats, all capable of

communicating fores to the hands of the milkers, although not all the real cow-pock. The surmounting of this obstacle enabled him to form a distinction between these diseases; only one of which he denominated the true, the others the spurious cow-pock, as possessing no specific power over the constitution.

Scarcely had this impediment been removed, before another of seemingly greater magnitude started up; for it was found, that a person who had milked a cow under the true cow-pock, and had thereby apparently gone through the disease with others, was liable to receive the small-pox afterwards. Which of us, Gentlemen, would have pursued the subject a moment afterwards? Disappointed and thwarted in our hopes, we should have relinquished for ever a subject that seemed to afford no criterion of success or security. Thanks to the genius of Jenner, or to that Power that inspired and destined him to rank among the benefactors of mankind, his energy surmounted every obstacle, and led him to reflect, that the operations of Nature are generally uniform, and that it was not probable the human constitution (having undergone the cow-pock) should in some instances be perfectly secured from the small-pox, and in others remain unprotected, he resumed his labours with redoubled ardour, and the result was fortunate; for he now discovered, that the virus of the cow-pock was liable to undergo progressive changes, from the same causes precisely as that of the small-pox; and that when it was applied to the human skin in its degenerated state, it would produce the ulcerative effects in as great a degree as when it was not decomposed, and sometimes far greater; but having lost its specific properties, it was incapable of producing that change in the human frame which is requisite to render it unsusceptible of the variolous contagion: hence it appeared evident, that a person might milk a cow one day, and, having caught the disease, be for ever secure; while another person, milking the same cow the next day, might feel the influence of the virus in such a way as to produce a fore

or sores, and in consequence of this, might experience an indisposition to a considerable extent ; yet, as has been observed, the specific quality being lost, the constitution would receive no peculiar impression.

During this investigation, he was struck with the idea that it might be practicable to propagate the disease by inoculation, after the manner of the small-pox, first from the cow, finally from one human being to another ; he boldly made the attempt, and for ever secured humanity from deploring the ravages of the most pestiferous disease that ever visited the earth ; and in 1798 he divulged this wonderful discovery to an admiring and astonished world.

Medical professors have often observed, that inoculation of variolous matter, though repeatedly performed, has not produced such an eruption of the small-pox as affords a security against the infection of this disease in future. Jenner experienced an analogous result in vaccine inoculation ; he found that herpetic eruptions in children, occasionally prevented the vaccine, as well as the variolous virus from producing their correct action. That the skin although it might be apparently sound, at the point of insertion, is nevertheless so influenced by the disease, as frequently to baffle every effort to produce a correct pustule, and consequently to secure the constitution from the contagion of the small-pox ; hence he inferred, that practitioners should be particularly circumspect when they inoculate those who have cuticular diseases, and that the danger of insecurity would be at once obviated, if on the appearance of an irregular pustule the disease were to be subdued by proper applications, and the patient then re-inoculated.

“ Anomalies,” he observed, “ assuming different forms, may be excited, according to the qualities of the virus applied, or the state of the person inoculated ; but by far the most frequent

variety or deviation from the perfect pustule, is that which arrives at maturity, and finishes its progress much within the time limited by the true. Its commencement is marked, by a troublesome itching; and it throws out a premature efflorescence, sometimes extensive, but seldom circumscribed, or of so vivid a tint as that which surrounds the pustule completely organized; and, (which is more characteristic of its degeneracy than the other symptoms) it appears more like a common festering produced by a thorn or any other extraneous body sticking in the skin, than a pustule excited by the vaccine virus. It is generally of a straw colour, and when punctured, instead of the colourless, transparent fluid of the perfect pustule, its contents are found to be opaque. A little practice in vaccine inoculation, attentively conducted, impresses on the mind the perfect character of the vaccine pustule; therefore, when a deviation arises, of whatever kind it may be, common prudence points out the necessity of re-inoculation. The deviation, when it arises from the cuticular disease just noticed, generally corresponds with that above recited. If the pustule is not much disturbed in its course by scratching, it commonly terminates in a scab of a pale brown or amber colour, and soft in its texture, compared with that produced by the true vaccine pustule; and there is abundant testimony to conclude, that the fluid taken from a spurious vaccine pustule thus excited, is capable of propagating and perpetuating its like."

Hence, whenever the pustule has an irregular appearance, after removing the eruptive disease of the skin, inoculation should be repeated, to obviate the most distant insecurity.

It is rarely that genius, however distinguished, is so accurate as to give a first essay, even upon a subject in some measure familiar, without omission or redundancy, both as to matter and composition. To delineate a new field of discovery, from whom could we expect, not only a perfect outline, but the com-

pletion of every tint of light and shade ! These, however, were so accurately united in his "*Inquiry into the Causes and Effects of the Variolæ Vaccinæ*," as to induce a sagacious Physician, who never uttered a sentence without weighing its import, unequivocally to declare, "It appears to me, that none of the facts and observations introduced by Dr. Jenner, have been disproved or refuted; and that no information has been gained on any material point by all that has been written upon the subject since the publication of his first treatise : " and public conviction to this moment confirms the declaration of Denman.*

Some, indeed, learned members of this Society, in which I see a Ring, an Aikin, and an Addington,† may be ranked among the coadjutors of Jenner, and have offered their handful of mortar to cement the noble edifice ; but Jenner alone is the architect who laid the foundation of the glorious temple, on whose stately dome future generations shall gratefully inscribe

JENNERI

GENIO SALUTIFERO.

Had our illustrious Associate sordidly appropriated the fruits of his discovery to his private emolument, he might have acquired incalculable wealth ; but elevated by the dignified impulse of universal benevolence, he voluntarily sacrificed private benefit to public good, and gratuitously conferred upon mankind the means of saving 800,000 lives every year ; or, the sacrifice of 2500 human beings every day of the world's existence.

The philanthropy of Jenner did not confine itself within the limits of an empire, but extended from pole to pole : After divulg-

* Here we must beg to dissent from the learned author ; as restriction to a particular period of taking the vaccine virus, by Dr. Jenner, has been amply demonstrated by experiment to have no foundation. *Editor.*

† These Gentlemen, who are Members of the Medical Society, have distinguished themselves as authors on Vaccine Inoculation.

ing to Europe the means of security from the small-pox, he was solicitous of conveying to India the salutary blessing, which all Europe accepted with gratitude and avidity; to effect which purpose he gave me authority to subscribe one thousand guineas in his name towards defraying the expence of conveying vaccine matter to Ceylon, and our other extensive Asiatic possessions. In one of his letters to me, he introduces the plan he had recommended to the Government, in hope of crowning his exertions with speedy and certain success.

“ My first attempt was about the conclusion of the year 1799, by sending out my publications on the subject of the cow-pox, and a large quantity of vaccine virus, on board the *Queen East Indiaman*. This ship unfortunately was lost at sea. On hearing this disastrous event, I went on renewing my efforts to introduce vaccination amongst them, by such means as had proved successful in transporting the virus to countries far distant from this; but it never reached the shores of Hindostan in perfection.

“ I was sent for twice to the Secretary of State's Office, (Lord Hobart's,) where pressing solicitations had arrived for vaccine matter, on account of the devastations the small-pox was making, particularly in the Island of Ceylon. I represented in the strongest terms the necessity of employing means more effectual than sending out dried matter, and that I would engage to point them out.

“ The following was my proposition:---That on board some ship going to India, twenty recruits, or men of any description that had not had the small-pox, should be selected. That I should be allowed to appoint a surgeon to attend them, perfectly conversant with vaccine inoculation.

“ Thus I engaged that the disease should be carried in its most perfect state to any of our settlements.

“ After some deliberation, my proposals were, each time, rejected, and I was requested to put up matter in a way the most likely to succeed. This I complied with, and did my best ; but, as I told the gentlemen at the board, with only faint hopes of success.

“ Ruminating on the calamities to which our countrymen and the natives of Hindostan are exposed, and on the facility of subduing the small-pox, were the cow-pox once established amongst them, I was struck with the idea, that that obstacle was by no means invincible; nothing being required to remove it, but a ship properly equipped. It was then that I wrote to you on this subject, and proposed the immediate raising by subscription a sum sufficient to defray the expenses, at the same time requesting you to put my name down for a thousand guineas.

“ Happily, soon after, intelligence was received that vaccine matter had reached India in perfection, through the persevering industry of my friend Dr. de Carro of Vienna. It was by his means that it was first planted in Constantinople, and from thence he contrived that it should move forward to Bombay. You need not be told with what exultation it was received by all ranks of society ; the enlightened European and the poor Hindoo, both hailing it alike as the deliverer from a dreadful pestilence.”

The discovery of vaccine inoculation, when first announced by Jenner, was so wonderful and so unexpected, as rather to dazzle than convince his contemporaries of its vast importance. Even to many scientific men, it appeared most incredible, whilst they wished to see realized what they had deemed scarcely possible. Profound truths, or the vivid rays of light, on their first impulse, may confound intellect, or confuse vision : hence, observed the modest Fontenelle, “ If both my hands were full of truths, I would open one only at a time.”

At length, experience has enabled the world to appreciate the importance of a discovery, unequalled in history, and gratitude has paid its votive offerings to the genius of Jenner, from the thrones of both the Cæsars, the Imperial Parliament of Great Britain, and the various societies of literary characters throughout the civilized world. Whilst in him Britain claims a discovery, which will be recorded to her glory as long as a Newton or a Harvey shall dignify the page of science. One weighed the globe in the scale of gravitation, the other explained to man the laws of his existence; but to Jenner was devolved the power of preserving that existence; and to this society will remain to futurity the honour of owning him its early associate; for, however powerfully envy or malignity may attempt to lessen the importance of the Jennerian discovery, or to depreciate the dignified character of its author, time will prove the vindicator of truth. As Linné answered one who opposed his sexual system of botany, by pointing to an academy of children—"These," said he "will be our judges;" so Jenner, not walking over hecatombs of the slain, not surveying with melancholy retrospect, those rendered blind or deformed by variolous infection, may point to the rising generation, and enjoy the superlative gratification of contemplating myriads of fellow-creatures rescued from a deadly pestilence; which, under the blessing of Providence, he lived to subdue. Conscious, as he must be, of the high estimation in which he is held among philosophers and sages, he shuns adulation; and courts rural retirement, whenever his professional duties admit of moments of leisure; moments not given up to ease and inglorious indulgence. Whilst the great and opulent have been protected by his discovery; in the philanthropy of his mind, he confers the blessing equally on the friendless and the poor. The manner in which these moments of relaxation are spent, is described in such appropriate language in a letter I recently received from a correspondent, as to induce me to introduce it here.

“ About nine o'clock in the morning, I arrived at Berkeley, and immediately waited on my friend. He was just sitting down to breakfast. After the usual congratulations and inquiries respecting our common friends were over, I joined him in the repast of which he was about to partake. Our conversation, as might be expected, did not dwell long on other topics, but soon hastened to that important subject which has for some time arrested the attention of mankind, I mean the discovery of vaccine inoculation. I heard with much regret of the obstacles which envy, prejudice, and ignorance had raised to impede the progress of this salutary practice, and with heartfelt pleasure of its extensive and rapid propagation through almost every country of the globe. The parlour, in which we were sitting, looked into an agreeable lawn, on one side of which ran a walk, here and there perceptible between trees, till at length it was completely lost in a thick bower. I had observed, during our conversation, a great number of females, with children in their arms or by their sides, passing down the walk, and proceeding forward into the bower, which intercepted them from my view. The circumstance very much excited my curiosity; and I could not forbear interrupting the conversation to inquire of my friend what it meant. It has been my custom for some time, said he, to set apart one morning in the week for inoculating the poor; and this being the appointed day, the people you see are come from the adjacent villages on that account. You wonder, perhaps, continued he, to see them go so regularly into the bower and disappear; I will explain it to you. In the midst of those trees is a small mansion, built in the cottage stile; it consists of one room only, and was erected for the purpose of giving a rural appearance to that part of my garden. I have lately converted it into a place of utility; and the people who come to be inoculated assemble there, and wait until I come among them. It is for this reason I have given my little cottage the name of the Temple of Vaccina; and, like a faithful priest, added he, smiling, I am always anxious to find it filled with worshippers. But after breakfast, you shall go with me, and see in what

manner we proceed. I agreed to the proposal with pleasure, and in a few minutes we both rose up, and went together to the cottage. We found it almost full of poor people with their children. My friend first examined the arms of those he had inoculated the week before, and then inoculated others, strictly enjoining the parents to bring them the next appointed day. I felt a mixture of pain and entertainment in hearing some of the poor villagers express their apprehensions respecting the benefit which vaccine inoculation afforded them, and relate the prejudices of their rustic neighbours. But the Doctor very well understands the art of dealing with their prejudices; and it gave me great pleasure to observe the gentle and effectual manner with which he endeavoured to sooth their minds. It is a pleasing reflection, said he, after they were gone out, that these poor children are for ever secured from the dreadful evils which the disease I am striving to exterminate might have brought upon them: and when I consider the multitudes of the human race who have already availed themselves of the benefit, which I had the felicity to announce to mankind, and those who will hereafter avail themselves of it, my pleasure is so great, and my gratitude towards that Being whom I know to be the author of every blessing is so lively, that I can scarcely express either the one or the other. You have, said I, good reason to feel so: and with regard to your little temple here, reverting to the appellation which he had given to his cottage, it is a fortunate thing for us, that the system of polytheism has given place to the dictates of truth, else Vaccina would have been introduced as a new deity to the world, and men, if they regarded the advantages which she produced, would have done homage in this rural mansion, with greater delight and veneration than in the most magnificent and sumptuous temples that ever attracted the admiration of Greece and Rome."

In contemplating the extent of this splendid discovery, and the facility with which the public good it promises may be accomplished; and combining the various other discoveries and

improvements in science, which we have witnessed, what a sublime prospect is opened to the ardent genius of aspiring and ingenuous youth ! To instance a Franklin ; who, by means of the medium of a small metallic wire, subdued and governed the most tremendous agent in nature, and opened to us the arcana of electricity ; a discovery which Galvani and Aldini further extended ; and by which we are now led to conclude, that from the *Gymnotus electricus*, that diffuses the electric power in the ocean ; from all animal and brute matter, up to the clouds floating in the ambient air, an ætherial agency pervades all nature, and influences her hidden operations ; but, as Seneca observes, *Multa etenim sunt quæ esse audivimus, qualia autem sint ignoremus ! Quamque multa venientis ævi populus, ignota nobis, sciet.*

In a particular manner, the discovery which this society commemorates this day, affords the strongest encouragement to cultivate, with ardour, the science of medicine, after the example of our illustrious associate, to whom has been unanimously voted this gold medal, for his discovery of vaccine inoculation ; and which, in his absence, I deposite, agreeably to his request, with the learned President of this society ; who has, upon numerous occasions from this chair, which he has so long and honourably filled, instructed and improved a listening and grateful auditory : to my friend, Dr. Sims, therefore, do I, with the utmost pleasure, commit this medal, bearing the following inscription,

Don. Soc. Med. Lond. An. Salut. 1773.

Instit.

E. Jenner, M. D.

Socio suo eximio

ob

Vaccinationem

Exploratam ;

in honour of Dr. Jenner, as the greatest mark of approbation we can offer to the unrivalled merit, and deathless fame, of that man, who has removed the veil which concealed the sacred mysteries of Isis in this profound allusion to nature :

ΕΓΩ
ΕΙΜΙ ΠΑΝ ΤΟ ΓΕΓΟΝΟΣ
ΚΑΙ ΟΝ, ΚΑΙ ΕΣΟΜΕΝΟΝ
ΚΑΙ ΤΟΝ ΕΜΠΕΠΛΟΝ
ΟΥΔΕΙΣ ΠΩ ΘΝΗΤΩΝ
ΑΠΕΚΑΛΥΨΕΝ.*

*Dr. LETTSON'S "Expositions on the Inoculation of the Small-pox,
and of the Cow-pock."*

AFTER the experience of a great portion of the world in favour of the inoculation of the Cow-pock, and the most ample proofs of the danger of inoculating the Small-pox, it could hardly have been imagined, that the people of this country, where the providential discovery was made, should have been the only exception in Europe to its very general adoption; for in many parts of the continent, the Small-pox is nearly, if not altogether extirpated; and had the inoculation of the Cow-pock been universally adopted in this country, the Small-pox would also have been exterminated here, and known only by name.

Unfortunately for the health and existence of thousands of children, individuals, even of the medical profession, have attempted to excite the fears of parents, and encouraged the

* I am whatever is, or has been, and will be; and no mortal has hitherto drawn aside my veil.

inoculation of the Small-pox, by which the disease has become so extended and dreadfully fatal, as to have killed FORTY SEVEN CHILDREN in London, within the last seven days only.

Viewing this fatality with painful concern, because it might have been avoided; and being placed with the rest of my professional brethren, as guardians of the health and safety of the people; and perceiving that numbers are daily destroyed by the Small-pox, I deem it my duty to advise the parents of children to "stay the pestilence," and not to suffer themselves to be deceived by partial and dangerous insinuations.

Although the Cow is the healthiest and cleanest of all animals, the enemies of the Cow-pock have called this providential preservative, a *pestial disease*, whilst they eat the meat of the Cow to preserve their constitutions, and drink its milk which proceeds from the same source that affords the Cow-pock!

They report that it produces eruptions, whilst every body knows that children are almost universally liable to eruptions in their infancy; but the Cow-pock, which excites little if any disease, does not disorder the constitution, and consequently cannot be the cause of these eruptions. Many of these supposed cases I have visited, and found them in general as slight as the tooth-rash, or other trivial eruptions, to which infants are liable in their usual course of health, whether they have had the Cow-pock or not. I have indeed known many instances of eruptions in children having disappeared after they had been inoculated with the Cow-pock, and have afterwards enjoyed better health; but as the Cow-pock is always safe, even in the earliest stage of childhood, parents have hence been induced to have infants inoculated in a few days or weeks after their birth; at a period, when very few of them would escape without some eruptive affection, in the ordinary course of health: of such common occurrence to most infants, the enemies of the Cow-pock have availed themselves, and circulated reports of

dangerous eruptions from the inoculation, which every mother ought to have known is familiar to children ; and not in the most distant manner dependent upon or connected with the Cow-pock. I will risk the assertion, that no one new eruption or affection ever resulted from the Cow-pock. There never was a period in history, that children were not liable to various kinds of eruptions. Dr. Daniel Turner, who was a member of the College of Physicians in London, who wrote about the year 1726, declares, that "among the diseases of infants and young children, scarce any attends more frequently than pustulary or scabby eruptions, in several parts of their bodies, as the breech ; but more especially their foreheads, brows, and other parts of the face, which we find oftentimes over-run with dry and crusty scabs." 3d edit. 1726, ch. iv. p. 69. This has perhaps been the case since the world began, and may continue as long as children exist.

I have taken a great deal of pains to inquire after, and visit many of these cases, without finding one to justify these reports. Some I found were really the common itch, which had not appeared till several months had elapsed after inoculation ; some had the chicken-pox ; some the scarlet fever ; some were merely the bites of bugs or fleas ; but I never was yet able to find one instance of eruption, that could be fairly deduced from the Cow-pock ; and from the notorious falsity of those I have examined, I am now of opinion that no one serious or troublesome eruption was ever occasioned by the Cow-pock ; and these inquiries have all tended to confirm me in the perfect safety and healthiness of the process of inoculating the Cow-pock at every period of life.

Within the last three days only, I have taken the trouble of inquiring into the histories of five of these supposed dreadful instances of the most violent eruptions and humours said to have been brought on by the Cow-pock. The two first which I visited, were children, who had recently had the Cow-pock,

and afterwards from some transitions of the weather, which at that time had been very variable, some febrile indisposition had occurred, with a slight efflorescence of the skin, frequent under such circumstances. I saw the children about the third day of indisposition, at which time the efflorescence was scarcely perceptible, and after prescribing a medicine suitable to the fever, I retired, thinking it unnecessary from the slightness of the complaint to repeat my visit. The third case I visited, was in consequence of a current report, that a child had taken the Small-pox, after having been inoculated with the Cow-pock; from a view of the eruption, I did not think it to be the Small-pox; however, the father thus accosted me, "I pay so little attention to the reports about my child, that had I a thousand children, they should all have the Cow-pock." He was a person of good information, unbiaſſed by unfounded stories. The fourth subject was one which had excited very general alarm, and given rise to severe censures against the Cow-pock. As an individual it occasioned me more concern, as I had long entertained an high esteem for the family, most branches of which had been under my medical care. The child I allude to was described to me as having been nearly reduced to death by the virulence of the sores of the newly fabricated species called the green cow-itch of Dr. Mosely, which had extended from head to foot. I had often casually heard accounts of this miserable object, as it had been emphatically called, but I paid little attention to them, imagining them, like other similar tales, totally unfounded; at length however, I had the pathetic history from the parents themselves, in a party of company; my attention now was seriously arrested, and I requested permission to visit the object, and at least to endeavour to console the distressed parents. The next day I attended, and had the following narrative from the mother, on whose knee I found her only child; "that it had been inoculated about twelve months before, and continued perfectly well during the ten following months, at which period, it was sent to the care of a person in the country,

for the benefit of the air, whose child had likewise been inoculated with the Cow-pock, and like this infant, had been since covered with a similar foul eruption and running sores."

After this narrative, I cannot express the degree of pleasure I felt, in declaring that this child had caught a most violent itch from the other in the country. I immediately ordered the use of sulphurated ointment to the eruption, and in four days time to wash it off, as the child would then be well; and so it has proved.

The fifth case was truly afflicting. The child of a large family residing near London, was inoculated with the Cow-pock; at the same time the brothers and sisters who had not had the Small-pox underwent the same process in the most favourable manner about three years ago; they all continued in perfect health for two years and a half, when the youngest child, the subject of the present narrative, caught the chicken-pox, without any material inconvenience; soon afterwards it was attacked with the measles in the most severe degree, which has so reduced the constitution as to excite strongly marked symptoms of scrophula and consumption, with sores on the body usual in strumous maladies.

Thus I found that in every instance the reports of mischief from the Cow-pock were most completely unfounded; but had they come under the cognizance of Dr. Moseley, now refuted by Merryman and others, or of a person calling himself Dr. Squirrel, they might by the magic powers of imagination and prejudice, have worked up narratives too horrid for the nerves of tender mothers and gossiping nurses; but like the story of M. Montague's children, the baseless vision will be dissolved, and the thick mists which exhibit frightful spectres will be dissipated by truth and plain sense.

With respect to the last child noticed, when I blamed the parents for circulating stories which had not the least shadow of truth to support them, they replied that they were deceived by old women and nurses, who told them that they knew twenty other similar cases. I strongly insisted upon having their references, as I informed the parents that I would inquire after them; but out of the twenty, one only could be recollected, which fortunately I had myself attended, and like the present case had not the least affinity with the Cow-pock.

Some parents have, I fear, been so led away by the vulgar prejudices as to ascribe the eruptions which may have appeared on their children who have had the Cow-pock, to this source; whilst in reality they have originated from themselves. This is not a vague insinuation, for I have met with many such examples.

Much has been urged against the Cow-pock, as not affording a permanent security against the Small-pox: that numerous mistakes have been committed I am well persuaded; I know of many instances of the Chicken-pox having been inoculated for the Cow-pock; many persons unacquainted with the true Cow-pock, have incautiously practised inoculation; or by neglecting to follow Dr. Jenner's golden rule, never to inoculate from the Cow-pock, after the circular redness or efflorescence is formed*; many children have been inoculated, and whether the Cow-pock has taken effect or not, has not been ascertained, in consequence of these children not having been seen again by the inoculator: like the matter of the Small-pox, it does not always infect the subject: these, however, afford no proofs against the utility of the Cow-pock, but very strong ones of ignorance and neglect.

* This has been proved to be erroneous. The fact of the scab proving essential to excite the disease, sufficiently evinces that every preceding period is adequate to the same result. *Editor.*

The idle tale that the Cow-pock does not ever afterwards secure the person inoculated from the Small-pox, but preserves it only for a few years, has been held up to frighten the timid, but it is so contrary to all analogy and experience, that it scarcely requires a serious refutation.

It has been proved by many incontestable facts, that persons who have had the Cow-pock, at the distance of from twenty to sixty years past, have hitherto continued in security from taking the Small-pox, although to my knowledge some of them have been inoculated with the Small-pox by way of experiment; but admitting the known falsity, that the Cow-pock affords a security against the Small-pox for three or four years only, yet even under this supposition, were every person inoculated with the Cow-pock, the infection of the Small-pox would be annihilated, under which circumstances the inoculated subjects and their posterity would be secured from the Small-pox, because there would be no infection; without the existence of which the Small-pox could not be propagated.

Although I never saw an instance of the Small-pox following the inoculation of the Cow-pock, casual cases from some cause or other may have happened, as well as after the inoculation of the Small-pox. In one week I lately attended two children in different families, who had been inoculated with the Small-pox, by respectable practitioners, and took the disease afterwards, and suffered severely from it. I am now attending a lady who was inoculated by the late Baron Dimsdale, and afterwards had the natural Small-pox. A relation of mine inoculated by one of the Sutton's, since caught the Small-pox and died; but such instances are too frequent to leave any doubts of these facts, and as I have observed, may have likewise occurred in a few instances after the Cow-pock.

Whilst this essay was going to press, I visited in a family of the name of Johnston, in Sweet-apple-yard, Bishopsgate Street, a child about eleven years of age, whom I found labouring un-

der the confluent Small-pox, after having been inoculated with the Small-pox, by a respectable surgeon nine years ago. Two other children of the family were inoculated with the Cow-pock, who escaped infection, as well as another child of the family, who had been inoculated with the Cow-pock, five years previously to the present time; by these instances, it might be inferred, that the inoculation of the Cow-pock affords as certain a security, if not a more certain one against the Small-pox, than the inoculation of the Small-pox itself.

I have known children inoculated with the Cow-pock, instantly at their birth, in consequence of this event happening in a boarding house, loaded with the infection of the Small-pox, but these remained perfectly secure from this disease. I have even known two children suck one woman, one of the infants having taken the Small-pox, when the other was inoculated with the Cow-pock, and both continued to suck, till the Small-pox child died, whilst the other child under the Cow-pock, received no other infection.

Numerous instances have I known of children who have had the Cow-pock, afterwards having slept with their brothers or sisters in the worst kind of the Small-pox, but I never yet knew any one of these vaccinated children to have taken the Small-pox, in consequence of these trials, during an attentive practice ever since the Cow-pock was introduced. In visiting any child in the Small-pox, I uniformly advise the parents to have their other children vaccinated; and so hideous does a child usually appear, when labouring under the Small-pox, that in no instance has my advice been in vain; and although the child with the Small-pox may have died, I never knew any of these vaccinated children afterwards catch the Small-pox. Two exceptions to my advice did occur, but I only met the parents casually; who opposed the Cow-pock, from the usual fabrications they had heard, respecting humours, and similar absurdities. In one of these families there were three children who took the Small-pox

soon afterwards; two of these died, and the other is so disordered with the evil, which is no uncommon occurrence after the Small-pox, that death would have been preferable. This poor diseased child was brought to me for advice, and then I heard of the dreadful catastrophe in their family. The other parents of two children resided where I attended a family, whose three children had happily been inoculated with the Cow-pock, and I thought that the success here, would have induced the parents of the other children to have partaken of the same blessing, but they violently replied, that their children should not have a *bestial disease*. I have since inquired after this family; unfortunate parents! they have lost both of these children by the Small-pox; so that by the imposing nonsense of not having a *bestial disease* from the very animal that nourished them and their children, they are rendered childless, like many other deluded parents! Does any person believe that the fluid of the cow is less pure than the humours of intemperate man?

Many well meaning people have opposed the Cow-pock, as they say, that they might not tempt Providence; if this means any thing, it would be tempting Providence less, to embrace this blessing which is afforded to save life, than by refusing it. Christ himself used means to cure diseases, and was particularly attentive to little children. It was said, that he came to save life, and consistently with this character, numerous instances are recorded of the tender interest he took in curing diseases, but none of his refusing his aid. It is in the first place our duty to use our reason and exertions, to preserve ourselves by proper clothing, houses, food and drink, and trust to Providence for the blessing; but no religion instructs us to be negligent and to trust to Providence without we use those endeavours to take care of ourselves and our children, which reason enables us to do. In another sense it might be used as an excuse for every species of idleness, negligence and vice; any vagrant under this pretext might refuse to work, and plead for his con-

duft, that he would "trust to Providence," and hope to be fed without any exertion of body or mind; in short, were this disposition to become general, the farmer might neglect to sow his corn; famine and anarchy would ensue, and man would be reduced to a state below the beast that perisheth.

Some persons argue, that they will not bring a disease on themselves; this however, is no argument that they should not use their reason to prevent disorders. The Cow-pock is no real disease, but it prevents the worst that ever afflicted mankind. Happy indeed would it be, for these very people who will not save their children's lives by the means afforded them, could they truly say that they have not brought diseases upon themselves, by intemperance, frequenting bad houses, and by other immoralities, which really bring on half their disorders. If they thus injure themselves, it affords a more forcible argument for exerting their endeavours to preserve those under their protection from danger; and no danger is greater to children than the Small-pox; and there is no other secure means of preserving them than the Cow-pock; under what excuse then can parents hesitate to save their children from an almost certain calamity?

The inoculation of the Small-pox affords no more security against catching the Small-pox again, than the Cow-pock does; but inoculation of the Small-pox is always a dangerous experiment, as it sometimes proves fatal; and where it does not kill, it diffuses its own poison so extensively as to have occasioned more deaths than ever happened before the inoculation of it was practised. The Parliament of Great-Britain were convinced of this, after a careful examination of many eminent physicians and surgeons, and by the certain proof of the bills of mortality published every week in London; and before rewarding Dr. Jenner, the discoverer of the Cow-pock, they made the following declaration, after examining Dr. Jenner, Dr. Afb, Dr. Bradley, Mr. Home, Sir Walter Farquhar, Mr. Cline, Dr. Sims,

Dr. Woodville, Dr. Blane, Mr. Knight, Dr. Moseley, Robert Pope, Lord Berkeley, Mr. Ring, Rev. G. C. Jenner, Mr. Birch, Dr. Saunders, Dr. Marshall, Mr. Griffiths, Dr. Dale, Dr. Denison, Mr. Taylor, Dr. Lister, Mr. Cuff, Dr. Skey, Dr. Lettsom, Dr. Frampton, Dr. Baillie, Dr. Croft, Dr. Nelson, Mr. Fuller, Mr. Long, Dr. Pearson, Lord Rous, Dr. Thornton, Mr. Addington, Dr. Rowley, Mr. Simpson, Dr. Lind, His Royal Highness the Duke of Clarence, Dr. Heberden, Mr. Gardner, Mr. Jordan, Mr. Keate, Mr. Robert Keate, &c. "that by the statements of
 "the mortality occasioned by the Small-pox in 42 years BEFORE
 "inoculation was practised in England, and of the 42 years
 "AFTER inoculation was practised, the result appears to be an
 "increase of deaths amounting to 17 in every 1000; the gene-
 "ral average giving 72 in every 1000 during the FIRST FOR-
 "TY-TWO YEARS, and EIGHTY-NINE IN THE FORTY-TWO YEARS,
 "ending with 1772; so as to make the whole cause of deaths
 "in the latter period, ONE THOUSAND SEVEN HUNDRED AND
 "FORTY-TWO!"

Admitting the facts and inferences urged by Parliament, which cannot be refuted, that the inoculation of the Small-pox tends to increase the deaths; what then must foreigners think of a Parliament that rewarded Dr. Jenner, for the discovery of the Cow-pock because it prevented the infection of the Small-pox, and its consequent destruction; and yet, that this very Parliament should tolerate a practice, and the inoculation of that disease, for the extinction of which they paid the reward. Had the Parliament, after exposing the baneful practice of inoculation of the Small-pox, acted with consistency, as the guardian of the public prosperity, this practice, so fatal to the community, ought to have been immediately interdicted; had this resolution functioned their primary one, five thousand youths, who have been since killed by the Small-pox, might now have been living members of the community to augment the population of that country which neglected their welfare, and the happiness of

those parents, who, misled by false insinuations, surrendered their duty to prejudice. It may be asked if our liberty should be thus restrained? Certainly the liberty of doing mischief, as murder, the setting of an house on fire, of introducing the plague or yellow fever. If persons attempt to drown themselves, the members of the Humane Society would undoubtedly oppose the liberty of suicide. Without salutary restraints, all the social bands of society would be dissolved, and anarchy ensue.

After the discovery of the Cow-pock was made known, many people had the good sense to have their children inoculated with it; in consequence of which the deaths in London scarcely exceeded 600 during the whole of last year, a number nearly 2000 less than usually occurred before the Cow-pock was introduced; but unhappily for the rising generation, some medical persons, and others, endeavoured early in the present year, to alarm the public, by circulating stories and representations which imposed upon many parents, and induced them to suffer their children to be inoculated with the Small-pox; by this practice the contagious poison has been spread throughout London to such an extent, as that within the last seven days a very considerable number of children have been killed by it, as has been related. About the same period upwards of 250 patients I am informed were inoculated in the Small-pox hospital with the same infectious poison, and afterwards dismissed from the hospital, thereby affording a more certain source of mortality, than if 250 mad animals had been at once let loose upon unguarded victims.

It is truly surprising that in a scientific nation, there should now be supported, at a great expense, such a repository of pestilence as the Small-pox hospital. What term of reproach should we apply to the Americans, if in imitation of the mother country, they should maintain a repository for keeping up and extending the yellow fever? What epithet should we apply to

a nation that employed the same means to perpetuate and extend the plague? Suppose that they should actually follow our example, we should still outdo the Americans and the Egyptians in mischief, because the Small-pox kills more than both the yellow fever and the plague.

I have long and carefully noticed the bills of mortality, in order to ascertain, among other objects, the number of deaths produced by the Small-pox every week; which I observed to have gradually diminished as the Cow-pock extended, till the number fell to one, and afterwards admitted of none. 'About this time it was, from the circumstances I have mentioned of circulating false reports against the Cow-pock, that the inoculation of the Small-pox became prevalent, which, aided by the patients from the Small-pox hospital, rapidly extended this disease, and shortly swelled the number of deaths to no less than 47 victims in the space of one week! that is from July the 9th to the 13th, 1805. Since which there have been killed in London alone, in the following four weeks, ONE HUNDRED AND TWENTY-FOUR PERSONS BY THE SMALL-POX! viz.

July 23, died of the Small-pox, 28.	
30, _____	24.
Aug. 6, _____	24.
13, _____	48.

The numbers of the blinded, maimed, or otherwise disfigured are not included.

About EIGHT HUNDRED THOUSAND have been inoculated with the Cow-pock, not one of whom, that I know of, has died, nor even one been maimed. What a blessing then to our children is the Cow-pock, and yet so ungrateful to Providence are some parents as to slight this inestimable blessing!

Although parents might have been unconscious of the mortality they were thus occasioning, the same could not apply to those who spread the poison by the practice of inoculation, for they could not but be acquainted with its contagious nature, as well as with the decision of Parliament. The criminality of intentionally setting an house on fire, is well known, but since party walls have been adopted, the setting of 100 houses on fire would probably prove less fatal to life, than the unguarded inoculation of a single person with the Small-pox; one instance among others is well ascertained, of a single inoculated child having infected 17 other children with the Small-pox, eight of whom died. If one person were intentionally to kill another, the law would condemn the murderer to suffer death; and what apology can be reasonably urged for propagating a poison, the mortal nature of which is universally known; but the extent to which it may spread is incalculable. Every medical professor, therefore, should religiously abstain from the possibility of injuring a fellow creature, and absolutely refuse to gratify the caprice of the thoughtless and ignorant. It has been pleaded by some, that if they did not inoculate, another practitioner would, and at the same time that they might thereby forfeit the future attendance of the family. It has certainly been highly honourable to the faculty, that they have so generally promoted the inoculation of the Cow-pock, in order to exterminate a disease, which has afforded them more pecuniary profit than any other. The plea, however, that others would inoculate the Small-pox if they did not, might be used as a pretext for committing the most criminal and illegal action, even of murder itself. It must be admitted that, in many instances, the practitioner is placed in a painful and delicate situation, when requested to perform an act, against which his conscience ought to revolt; but it may be presumed that any family whose attendance is worth preserving, would not only acquiesce in a rational explanation, but likewise entertain an higher esteem for upright conduct, and a greater confidence in abilities directed by integrity; whatever might, however, be the result, no sinister

consideration should be suffered to influence the acknowledged guardians of health to stifle philanthropy ; to sanction injustice ; or, in the words of the psalmist, "to give over to the pestilence ;" and if moral sentiment, and the impulse of conscience are not powerful enough to support rectitude of conduct, the just restraints of law ought to be invariably exercised. If a person purposely introduced the plague or yellow fever into this kingdom, the punishment of such a delinquent should not be too severe and exemplary ; but the plague and the yellow fever combined have not killed half the number of human beings that the Small-pox has done ; and yet, however incredible it may appear, there are individuals who possess the temerity to advertise that they indiscriminately inoculate the Small-pox, the most mortal of all other pestilence whatever. In London alone, it has been remarked, that it kills above 2000 persons every year, besides those on whom it inflicts blindness, evil, sores, stiff-joints, and other maladies ; whilst the Cow-pock has neither killed nor maimed one individual, although it has been practised throughout half of the globe, and has already nearly exterminated the Small-pox from most of the kingdoms in Europe, the British only excepted ; against which every other maritime state should immediately institute a rigid quarantine, and continue it as long as we tolerate this most infectious and deadly poison, in order to prevent its introduction into those countries, where the good sense of the people and the wholesome regulations of the government may have annihilated it ; for if we remain obstinate enough to keep up the disease, and to propagate it among ourselves by inoculation, we have no right to destroy our neighbours on the continent of Europe, by a pestilence which may be conveyed by infected clothes, twelve months after the existence of the disease.

In London there die upwards of 18,000 persons every year ; of these rather more than 6,000 die in infancy ; that is, there die about fifty persons every day, of whom seventeen are child-

ren, and of these children six die daily by the Small-pox and inoculation. To proceed in this statement, founded on facts, about 700 persons die every fourteen days in London; or 233 children in the common course of human events; that is, supposing that no disease were communicated to them by art. Now it is highly important to observe that upwards of 18,000 children have been inoculated with the Cow-pock in one year; and in the casual course of human events, taking the whole duration of the Cow-pock process at 14 days, there should have died of these vaccinated children during the process, no less a number than 233; but contrary to the common course of human events, and of casual deaths, instead of 233 having died, not one has suffered the least injury, much less the loss of a single life; but had these children not been inoculated with the Cow-pock it would hence be reasonable to conclude that this number would actually have died; and hence, that besides saving the 6000 children from the destruction of the Small-pox, it may be justly inferred, that it has prevented 233 deaths, which otherwise would have happened, had not the Cow-pock been communicated. These inferences thus afford incontrovertible proofs that the Cow-pock secures, by its agency, a more certain continuance of health to children, than if it had not been employed. I am surprised indeed, the more that I reflect upon the number of deaths daily occurring to children, that none of these casualties have ever occurred during the process of the Cow-pock. If success, therefore, almost beyond belief and previous imagination, be a proof of divine favour and blessing, this discovery of the Cow-pock, is doubly blest and favoured, by the providence of Him who rewards virtuous exertion even in this life.

This ought to produce a grateful and animating reflection to us, who own our countryman as the discoverer of this incalculable blessing, who might say with Joseph to his brethren, "God did send me before to save life." Gen. 45. 5. Let us therefore ardently and generally embrace it, as foreign nations have alrea-

dy done ; for by it we may save 50,000 lives a year among ourselves, which ought not to be suffered to be sacrificed by the Small-pox, and the contagious poison which is spread among children by its inoculation ; for we want inhabitants to defend this happy country, to promote its commerce, agriculture, and manufactures ; and that no method of increasing its health and population is more effectual than a general inoculation of the Cow-pock, is the confirmed judgment of

THE AUTHOR.

London, July, 1805.

The following Account of the SWEATING SICKNESS in England, is extracted from "Nichols's Antiquities of Leicesters."

"THIS was the last visitation of this extraordinary malady, which the learned Dr. Friend justly calls something very remarkable and wonderful : a distemper, which was never heard of before in any age or nation ; and which, after returning now and then for the space of some years, has ever since entirely disappeared. It originally was a native of our own island, and upon this account it is not so strange that it should be the most accurately described by one of our countrymen, the great and learned Dr. Caius. It began at first in 1483, in Henry the Seventh's army, upon his landing at Milford Haven, and spread itself in London, from the 21st of September to the end of October. It returned here *five* times, and always in summer, first in 1485 ; then in 1506 ; afterwards in 1517, when it was so violent, that it killed in the space of three hours ; so that many of the nobility died ; and of the vulgar sort, in several towns, half often perished. It appeared the fourth time in 1528, and proved mortal then in the space of six hours. Many of the courtiers died of it ; and Henry the Eighth himself was in danger.

In 1529, and only then, it infested the Netherlands and Germany; in which last country it did much mischief, and destroyed many; and particularly was the occasion of interrupting a conference at Marpurgh between Luther and Zuinglius about the Eucharist. The last return of it with us was in 1554. In Westminster it carried off 120 in a day; and the two sons of Charles Brandon, both Dukes of Suffolk, died of it. At Shrewsbury, particularly where Dr. Caius resided, it broke out in a very furious manner. The description he gave of it is terrible, like the plague of Athens. He very properly calls it a pestilent contagious fever of one natural day. The sweat itself he reckons only as a symptom or reason of this fever. The manner of its seizure was thus: first, it affected some particular part, attended with inward heat and burning, unquenchable thirst, restlessness, sickness at stomach and heart (though seldom vomiting,) head-ach, delirium, then faintness and excessive drowsiness. The pulse quick and vehement, and the breath short and labouring. Children, poor and old people, less subject to it. Of others, scarce any escaped the attack; and most died. In that town, where it lasted *seven* months, perished near a thousand. Even travelling into France and Flanders they did not escape it: and, what is strange, even the Scotch were free, and the English only affected, and foreigners not affected in England. None recovered under twenty-four hours. At first the Physicians were much puzzled how to treat it; the only cure was to carry on the sweat, which was necessary, for a long time; for, if stopped it was dangerous, or fatal. The way, therefore, was to be patient, and lie still, and not to take cold. If nature was not strong enough to do it, art should assist her in promoting the sweat, by cloths, medicine, wine, &c. The violence of it over in fifteen hours; but no security till twenty-four were passed. In some there was a necessity to repeat the sweating; in strong constitutions *twelve* times. Great danger to remove out of bed; some who had not sweated enough, fell into very ill fevers. No flesh in all the time; no drink for the *first* five hours;

for in the *seventh*, the distemper increases; about the *ninth* delirium; sleep to be avoided by all means. It appeared by experience, as the Lord Bacon observes, that this disease was rather a surprise of nature, than obstinate to remedies, if it were in time well. For, when proper care was taken, the patient generally recovered." Dr. Friend's History of Physic, part ii. p. 333-336; Dr. Kaye's account of this sickness, intituled "De Ephemerâ Britannica," was published in 1556, and very neatly reprinted at London in 1721, 8vo. The dedication to Anthony Perrenot, Bishop of Arras, is dated Jan. 11, 1555. To the first edition the author subjoined, Galen's two books, "De Libris propriis," and "De Ordine Librorum suorum;" and Hippocrates's book, "De ratione victûs in Morbis acutis." Dr. Kaye describes it as a new, strange and violent disease, for when it attacked any man, he either died or escaped within nine or ten hours; if he slept, to which all were then naturally inclined, he died in six hours; and if he took the least cold, in three. It raged among men of the strongest constitutions and years; few aged men, women, or children being subject to it, or dying of it; but which was most strange, no foreigner who was then in England died by it, though 400 Frenchmen were attending the ambassador where it was hottest. The English, as singled out, sickened and died of it in other countries, without any danger to the natives. It was first known among us in the beginning of the reign of Henry VII. but was not so violent as now: 800 persons died of it in a week in London; and in a few days about 960 at Norwich. Blomefield's Norwich, p. 131, 756; Baker, p. 341; Holinshed, p. 764, 794; Stowe, p. 486. It did not visit Norwich, in 1517, 1528, or 1529. It began Sept. 21, 1483, and lasted to the end of October. It seized the parties with a violent *burning sweat*, which so violently distempered the blood with ardent heat, scarce one in one hundred escaped alive; for which account it was also called the *dead sweat*; for all were inanimate as soon as it took them, or very soon after yielded up the ghost; and what was worse, as it appeared

afterwards (Hall. fol. 111, 6 Hen. VII.) the same persons were liable to the same disease again. (Biomefield, p. 26) Baker says, the remedy found was, that if one was taken with it in the day, he was presently to lie down without talking, and never rise of twenty-four hours; and if in the night not to rise at all during that time; and neither eat or drink, or at least but moderately. "In the same yeere a new kind of sickness invaded suddenlie the people of this land, passing through the same from the one end to the other. It began about the one and twentieth of September, and continued untill the latter end of October, beinge so sharpe and deadlie, that the like never was heard of to anie man's remembrance before that time; for suddenlie a deadlie burning sweat so assailed their bodies and distempered their blood with a most ardent heat, that scarce one amongst an hundred that sickened did escape with life; for all in manner, as soon as the sweate tooke them, or within a short time after yielded the ghost. Beside the great number which deceased within the citie of London, two maiors successivelie died within eight daies, and six aldermen. At length by the diligent observation of those that escaped (which marking what things had doone them good and holpen to their deliverance, used the like againe, when they fell into the same disease the second or third time as to diverse it chanced) a remedie was found for that mortal maladie, which was this: if a man in the day time were taken with the sweat, then should he straight lie down with all his clothes and garmentes, and continue in his sweate four and twentie hours, after so moderate a sort as might be. If in the night he chanced to be taken, then should he not rise out of his bed for the space of four and twentie houres, so casting the clothes that he might in no wise provoke the sweate; but lie so temperatelie, that the water might distill out softlie of the owne accord, and to abstaine from all meat, if he might so long suffer hunger; and to take no more drinke, neither hot nor colde, than would moderatelie quench and assuage his thirstie appetite. Thus in lukewarm drinke, temperate heate, and measurable cloaths, manie escaped. Few which used this order (after it

was found out) died of this sweat. Marie one point diligentlie above all other in this cure is to be observed, that he never did put his hand or foot out of the bed to refresh or coole himself, which to doo is no lesse jeopardie than short and present death. Thus this disease, coming in the first yeare of king Henries reigne, was judged (of some) to be a token and signe of a troublous reigne of the same kinge, as the prooffe partlie afterward shewed itself." Hollinshed, p. 763; copied by Grafton, p. 857. Hall says, "it was so fore, so paynfull and sharp that the lyke was never harde of to any manes remembrance before that time. For suddenly a deadly and burnynge sweate iavade their bodies and vexed their blood with a most ardent heate, infesting the stomach and the head previously; by the tormentyng and vexacion of which sicknes, men were so fore handled, and so paynfully pangued, that if they were layed in their bed, beyng not liable to suffre the importunate heat, they cast away the shetes and all the clothes lying on the bed. If they were within apparell and vestures, they would put off all their garmentes even to their shertes. Others were so drye, that they dranke the colde water to quenche their importune heat and insaciabie thirst. Others that coude or at the least woulde abyde the heat and styntche (for in dede the sweate had a great and a strong favoure) caused clothes to be layed upon them, as much as they coude beare; to dryve out the sweate, yf it might be. All in maner, as soon as the sweate toke them, or within a short space after, yielded up their ghost. When any person had fully and completely sweate twenty-four hours (for so long did the strength of this plague hold them) he should be then cleerly delivered of his disease; yet not so cleane ryd of it, but that he might shortly relaps, and fall agayn into the same evyll pyt; yea, agayne and twyse agayne, as many one indede dyd, which after the third tyme dyed of the same. This strange and unknown disease, at that tyme, vexed and greved only the realme of England in every toun and village, as yt dyd diverse tymes after. But lv yere after yt sayled into Flaunders, and after into

Germany, where it destroyed people innumerable for lack of knowledge of the English experience." Hall, f. 111. It came again 22 Hen. VII. (Ib. f. iix) 9 Hen. VIII. "this malady was so cruell, that it killed some within three houres; some within twoo houres; some merry about diner, and dedde at supper. Many dyed in the kyng's court; the lorde Clinton, the lorde Grey of Wilton, and many knightes, gentlemen, and officers. For this plague Mighelmas terme was adjourned; and, because that this malady continued from July to the middle of December, the kyng kept himself ever with a small compaignie, and kept no solemne Christmas, willing to have no reason or feare of infection. In some one toun halfe the people died; and in some other the thirde parte, the sweate was so fervent and infeccious (f. lxiii.) 20 Hen. VIII. in the end of May it began again at London, and went through the realm. Many died within five or six hours; divers in the court, among them, Sir Francis Poynts, who was embassador to Spain. The king and court remained at Tittenhanger, which was daily purged with fires and other preservatives. F. clxxi." P. 891.

[*British Critic.*]

NEW PUBLICATIONS.

MEDICAL THESES, *selected from among the Inaugural Dissertations, published and defended by the graduates in medicine of the University of Pennsylvania, &c. &c. By Charles Caldwell, M. D. Editor of the work.—Philadelphia.—T. & W. Bradford, 18c6. 8vo. pp. 396.*

The following is the Table of Contents to the second volume of Medical Theses.

- I. JOHNSON on the Influenza.
- II. STUART on the Salutary Effects of Mercury, in Malignant Fevers.
- III. GLOVER on Digestion.
- IV. HODGES' Experiments and Observations on the Absorption of Active Medicines into the Circulation.
- V. QUACKENBOS on Dysentery, by an induction of facts from which the Mitchillian Doctrine of Pestilential Fluids is illustrated.
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- X. BRYARLY on the Lupulus Communis or Common Hop.
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- XII. KLAPP'S Chemico-Physiological Essay disproving the existence of an Aëri-form Function in the Skin, and pointing out, by experiment, the impropriety of ascribing Absorption to the External Surface of the Human Body.
- XIII. DANGERFIELD on Cutaneous Absorption.
- XIV. TONGUE on the three following subjects.
 1. An attempt to prove, that the Lues Venerea, was not introduced into Europe from America.
 2. An Experimental Inquiry into the Modus Operandi of Mercury, in curing the Lues Venerea.
 3. Experimental proofs that the Lues Venerea, and Gonorrhoea, are two distinct forms of disease.

A Treatise on the management of Female Complaints, and of Children in early infancy. By Alexander Hamilton, M. D. Revised and enlarged by his son, Dr. James Hamilton, Professor of Midwifery, in the University of Edinburgh, &c.—Philadelphia—Docton.—pp. 319.—Price 1 dollar.

ERRATUM.

Page 254. line 16. for *pretend to teach*, read, *pretend to treat*.

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